# Albion College Academic Catalog 2023-24

## Catalog of Entry Philosophy

Though graduation requirements of the College may change while a student is enrolled, it is expected that each student will meet the graduation requirements outlined in the Academic Catalog that is in effect at the time he or she entered Albion. The "catalog of entry" philosophy is considered applicable for students who leave the College and whose interrupted course of study is not longer than five years.

## Catalog Changes

The Academic Catalog is a general summary of programs, rules, policies and procedures for academic and student life, and is provided for the guidance of students. However, the catalog is not a complete statement of all programs, rules, policies and procedures in effect at the College. In addition, the College reserves the right to change without notice any programs, rules, policies and procedures that appear in this catalog. The 2022-23 edition of the Academic Catalog was published August 29, 2022. Anyone seeking clarification on any of this information should consult with the Albion College registrar.

## Non-Discrimination Statement

Albion College is committed to a policy of equal opportunity and non-discrimination on the basis of sexual orientation and of race, color, national origin, religion, sex, age or disability, as protected by law, in all educational programs and activities, admission of students and conditions of employment. Questions or concerns about this College policy should be directed to the Human Resources Office.

Students who have learning disabilities should contact the Cutler Center for Student Success.

# Academics at Albion College

## Introduction & Curriculum Overview

At the heart of the Albion Experience is an intellectually stimulating commitment to the liberal arts. Albion's core curriculum is a program of learning that is initiated with the First-Year Seminar and culminates with the conferring of the bachelor's degree. Students begin their academic careers in a First-Year Seminar designed to familiarize them with the liberal arts tradition in an intimate classroom environment that fosters open communication, nurtures critical thinking, and promotes improvement in writing and speaking. Albion is committed to having students complete their undergraduate education with an experience that brings continuity, coherence and focus to their academic course work and that involves the students themselves, soon-to-be graduates, as teachers, facilitators and presenters.

Between the First-Year Seminar and graduation, students complete other core courses: five Modes of Inquiry courses and four category requirements. These courses provide analytic tools for understanding the world, offer rich and complex accounts of social life, encourage examination of these accounts, and contribute to a profound understanding of the interconnectedness of learning and living in a global community. In addition, courses are distributed across the four divisions of the College: fine arts, humanities, natural sciences and mathematics, and social sciences. The liberal arts core serves as the impetus and context for lifelong learning, preparing students for the phase after college when they must themselves provide education and expertise as well as continue to learn, collaborate, and facilitate at home, at work, and in a local and global community.

In addition to the core curriculum, all students are required to complete a major, which provides a depth of intellectual study that prepares students for graduate and professional school, as well as for a rich diversity of careers and life experiences. These majors may be a conventional departmental major, a not-so-conventional interdepartmental major or the unconventional individually designed major. A commitment to academic excellence within all academic departments ensures every student that fulfilling the requirements of the major will be a comprehensive and challenging scholarly experience. Other opportunities for in-depth exploration and clustering of courses include minors and concentrations.

Choice characterizes the general education requirements as well as the major. Each Albion student is an adult, capable of making sensible decisions about his or her personal future. But inherent in the right to make decisions is the potential to make mistakes. So Albion College provides assistance to students in planning their education. During their first year at Albion College, academic advisers are assigned to all students to monitor academic progress and help each student begin fulfilling his or her graduation requirements. After the first year, students are free to choose a faculty adviser who will help develop a program of study based on the student's goals. Students who do not meet with their adviser during each semester's academic advising period will not be allowed to register until they have proof of advising.

**It is ultimately the student's responsibility to be aware of and fulfill all graduation requirements.** To assist students in this endeavor, the Registrar's Office prepares and maintains an audit for each student at the end of the sophomore year. These reports indicate progress toward completing graduation requirements. Students are provided with updated audits prior to each fall semester. Audits are available from the student's adviser or directly through the Registrar's Office.

# Curriculum Overview

The primary responsibility for meeting the College's academic requirements rests with each student. This chart serves as a guide to the required and elective courses that fulfill the units needed for graduation. They are explained in greater detail on the following pages. The complete requirements for graduation are outlined in the Academic Regulations section of this catalog.

**Core Requirement**

**I. Liberal Arts 101** (First-Year Seminar; 1 unit)

**II. Modes of Inquiry** (1 unit in each)

Artistic Creation and Analysis
Historical and Cultural Analysis
Modeling and Analysis
Scientific Analysis
Textual Analysis

**III. Category Requirements** (1 unit in each)

Environmental Studies
Race & Ethnicity Studies
Gender Studies
Global Studies

The Brown Honors Program core requirements are found in the Programs of Study section.

**Units for Core: 10**

**Among the 32 units required for graduation, the following distribution of courses must also be fulfilled. These courses can count toward modes, categories, majors, minors and/or concentrations.**

- Two units in humanities (can be from same department): English, Modern Languages and Cultures, Philosophy, Religious Studies, Honors
- Two units in mathematics or natural sciences (can be from same department): Biology, Chemistry, Computer Science, Geological Sciences, Mathematics, Physics, Honors
- Two units in social science (can be from same department): Anthropology and Sociology, Communication Studies, Economics and Management, History, Political Science, Psychology, Honors
- One unit in fine arts: Art and Art History, Music (including up to four 1/4-unit music ensembles), Theatre, Honors

**Major Requirement: All students are required to complete an approved major.**

Accounting
Anthropology
Anthropology and Sociology
Art (Studio Art)
Art History
Biochemistry
Biology
Business
Chemistry
Communication Studies

Computer Science
Earth Science
Economics and Management
English
Environmental Science
Environmental Studies
Ethnic Studies
Exercise Science
Finance
French
Geological Sciences
German
History
Individually Designed Major
International Studies

Integrated Marketing Communications

Marketing Management
Mathematics
Mathematics/Economics
Mathematics/Physics
Music
Philosophy
Physics
Political Science
Psychology
Public Policy
Religious Studies
Sociology
Spanish
Sustainability Studies

Theatre
Women's and Gender Studies

**Units for Major: 8-10**

**Minors: Students may choose to complete a minor.**

**Departmental and Interdisciplinary Minors**

Anthropology

Anthropology,
Anthropology/Sociology

Art

Art, Art History

Biology

Cell and Molecular Biology
Environmental Biology

Business and Organizations
Chemistry
Communication Studies
Computer Science
Economics and Management

Accounting—Corporate Track, Economics, Finance, Management

Education

Educational Studies

English
Foreign Language

French, German, Spanish

Gender Studies
Geological Sciences

Geology, Environmental Geology, Geographic Information Systems, Paleontology

History
Mathematics

Mathematics, Applied Mathematics, Statistics

Philosophy

Philosophy, History of Philosophy, Philosophy of Mind, Value Theory

Physics
Political Science
Psychology

Religious Studies
Sociology

Sociology, Anthropology/Sociology

Theatre
Women's Studies

**Concentrations: Students may also choose to complete a concentration designed to prepare them for specific careers. Some of these concentrations are linked to the College's Institutes and Centers, and, in these cases, students must be admitted to the respective Institute or Center to participate fully in its curriculum. The available concentrations are listed below.**

Environmental Science
Environmental Studies
Human Services
Law, Justice, and Society
Neuroscience
Public Policy and Service

**Institutes, Centers, Programs**

Prentiss M. Brown Honors Program
Center for Sustainability and the Environment
Gerald R. Ford Institute for Leadership in Public Policy and Service
Carl A. Gerstacker Institute for Business and Management
Institute for Healthcare Professions
Fritz Shurmur Center for Teacher Development

**General Electives: Electives are courses that do not count toward a specific program (such as a major) but contribute toward the total units needed for graduation.**

**Units for Electives: 12-14**

**Writing Proficiency Requirement:** All students must also pass the writing proficiency requirement before they graduate.

**Total Units for Graduation: 32**

**The Core Requirement**

At Albion, the general education requirement is referred to as "the core." Students begin to fulfill the core in their first semester with Liberal Arts 101; some will be able to complete much of the core requirement by the end of their first year.

I. **Liberal Arts 101** (First-Year Seminar; 1 unit)
II. **Modes of Inquiry (1 unit in each)**
   Textual Analysis
   Artistic Creation and Analysis
   Scientific Analysis
   Modeling and Analysis
   Historical and Cultural Analysis
III. **Category Requirements** (1 unit in each)
   Environmental Studies

Race & Ethnicity Studies
Gender Studies
Global Studies

Students must also complete a distribution as follows: one unit in fine arts (art and art history, music, theatre, honors), two units in humanities (English, foreign languages, philosophy, religious studies, honors), two units in mathematics or natural sciences (biology, chemistry, computer science, geological sciences, mathematics, physics, honors) and two units in social science (anthropology and sociology, economics and management, history, political science, psychology, speech communication, honors).

I. **Liberal Arts 101: First-Year Seminars**

The First-Year Seminars are distinguished by their small class size and close personal attention. Students select from a wide variety of seminars in which academic skills, creativity, active inquiry and collegiality are nurtured. Seminars introduce first-year students to college life by focusing on the process of learning, in and out of the classroom. Seminars share a common weekly community meeting that emphasizes student academic and social transitions. In addition, the First-Year Seminars foster co-curricular outreach. First-Year Seminars have the following characteristics.

1. They are inquiry-based, writing-intensive, focused on developing critical thinking skills, and they emphasize discussion.
2. They are as interdisciplinary as possible, exploring multiple modes of inquiry.
3. They nurture creativity in all forms.
4. They encourage community-building and outreach as well as co-curricular experiences.

**Student Learning Outcomes:**

- Students will be able to use appropriate and relevant ideas in writing.
- Student will be able to critically interpret or evaluate source material.
- Students will be able to demonstrate innovative thinking.

I. **The Modes of Inquiry**

The Modes of Inquiry core requirement reflects the awareness that there are several fundamental types of analysis that scholars use to understand the world. All Albion College courses require students to employ analytical and creative tools while completing course assignments. A Mode course, however, requires both professor and student to approach the teaching and thinking process with a significantly higher level of self-awareness and intentionality. Students are required not only to think, but also to think about their thinking.

**Textual Analysis**

Analyzing a text (including works of art and music, written and oral texts, and rituals and symbols) involves understanding not only what meaning that text holds but also how those meanings are produced, what purposes they serve, and what effects they have, as well as exploring the ways in which a text conveys meaning. In order to fulfill this mode of inquiry, courses must:

1. Focus on the methods of analysis employed by at least one specific discipline or area of scholarship;
2. Foster inquiry into the particular strengths and weaknesses of those methods;
3. Require students to analyze texts in writing;
4. Foster inquiry into the intellectual or cultural systems that produce the text's meaning and effects.

**Student Learning Outcomes:**

- Students will be able to analyze texts.
- Students will be able to demonstrate an understanding of the intellectual or cultural system the produce a text's meaning and effects.

**Artistic Creation and Analysis**

Courses in this mode focus on the uniquely symbolic and expressive way in which the arts explore and express ideas and feelings. In order to fulfill this mode of inquiry, courses must:

1. Require the creation or performance, and the analysis of works of art;
2. Work with culturally produced rather than naturally occurring objects or experiences that have artistic, social or historical significance (for example, art objects, works of literature or various types of performances);
3. Introduce appropriate forms of critical inquiry and analysis, including area-specific vocabularies, materials, techniques and/or methodologies;
4. Encourage students to become critical and introspective about their cultural experiences;
5. Focus on the methods and materials by which the work produces meaning as well as what meanings are to be produced, emphasizing the dialogue between form and content in the area of study

**Student Learning Outcomes:**

- Students will be able to demonstrate strategy or skill within a particular domain.
- Students will be able to consider and articulate acceptable approaches to solving problems.
- Students will be able to review and reflect on results with some consideration of ongoing growth and development.

**Scientific Analysis**

Courses in this mode involve the observation and interpretation of the natural world. In order to fulfill this mode of inquiry, courses must:

1. Explore the subject matter and methodology of one or more of the natural sciences;
2. Demonstrate how fundamental principles of these disciplines form the basis for deriving specific results;
3. Require students to make observations and formulate hypotheses to explain their observations;
4. Require students to test their hypotheses or other scientific theories to appreciate their strengths and weaknesses;
5. Demonstrate applications to human society and the natural world;
6. Include a laboratory as a significant component of the course.

**Student Learning Outcomes:**

- Students will be able to propose a hypothesis or solution.
- Students will be able to evaluate hypotheses or theories.
- Students will be able to apply and adapt knowledge learned in this course to a situation in human society and/or the natural world.

**Historical and Cultural Analysis**

Courses in this mode focus on how human knowledge is determined by its cultural and historical context, and how this knowledge in turn shapes cultures and creates historical change. In order to fulfill this mode of inquiry, courses must:

1. Include material significantly removed from the students' experience either by virtue of cultural or historical distance;
2. Direct students to investigate their own cultural and historical moment from a perspective informed by their study of culture or history;
3. Require students to explore the specific cultural context of artifacts, to the extent that the course covers artifacts of a different culture or from a different historical period.

**Student Learning Outcomes:**

- Students will be able to demonstrate an understanding of the specific cultural context of artifacts, to the extent that the course covers artifacts of a different culture or from a different historical period.

- Students will be able to demonstrate an understanding of the complexity of elements important to meembers of another culture.
- Students will be able to demonstrate an understanding of the complexity of elements important to their own culture.

**Modeling and Analysis**

Courses in this mode derive some essential or simplified features from logical, physical, social or biological phenomena, and describe and interpret them within an analytical framework. In order to fulfill this mode of inquiry, courses must:

1. Explore logical, physical, social or biological phenomena;
2. Enable students to decide which features of the phenomena to describe and what simplifying assumptions to make;
3. Derive predictions from the model and interpret them in the original context;
4. Consider the usefulness and the limits of the model and compare it with other possible models.

**Student Learning Outcomes:**

- Students will be able to make appropriate judgements based on evidence.
- Students will be able to make appropriate conclusions or predictions based on a model.
- Students will be able to demonstrate an understanding of the limitations and implications of the model.

**Category Requirements**

A liberal arts education prepares students to play a critical, thoughtful role as citizens in their society. Courses in environmental, ethnicity, gender and global studies deepen students' understanding of themselves, society and the world by introducing them to many different perspectives. To this end, all students are required to take one unit each in environmental studies, ethnicity studies, gender studies and global studies as specified below.

**Environmental Studies**

Students are required to take one unit from the list of courses approved as satisfying the environmental studies requirement (see www.albion.edu/registrar/). Many of these courses also will satisfy a requirement in a major, in a program or in a concentration. Each approved course meets the following criteria:

1. It must substantially enhance students' understanding of the earth's environment.
2. It must deal substantially with the consequences of human intervention into natural systems.
3. It must lead students to view the relationship among elements of environmental systems from an interdisciplinary perspective.
4. It must focus on the perspectives that environmental studies brings to the discipline.

**Student Learning Outcomes:**

- Students will be able to demonstrate an understanding of issues or problems related to the earth's environment.
- Students will be able to evaluate consequences of human intervention in natural systems.
- Students will be able to demonstrate the ability to explain environmental systems from an interdisciplinary perspective.

**Race & Ethnicity Studies**

Students are required to take one unit from the list of courses approved as satisfying the ethnicity studies requirement (see www.albion.edu/registrar/). Many of these courses also will satisfy a requirement in a major, in a program or in a concentration. Each approved course meets the following criteria:

1. It must begin from the fact that race is not biologically real but is socially real and foster inquiry into the social construction of race and ethnicity in specific historical contexts.
2. It must address the way that policy, law, norms, practices, and/or ideas perpetuate racial and ethnic inequity, independent of individual prejudice. Courses are expected to address at least one of these items (not all).
3. It must explore the ways in which social categories of race and ethnicity intersect with at least one other system of oppression (e.g. those associated with gender, sexuality, (dis)ability, social class/socioeconomic status, religion/religious beliefs, etc.).
4. It must focus on the perspectives that race and ethnicity bring to the discipline, ideally centering on texts/scholarship/creative works written/created by members of hisotircally marginalized communitites.
5. It must provide students with the opportunity to examine their own experiences with race and ethnicity, ideally in the context of writing and discussion/critique/workshop.

**Student Learning Outcomes:**

- Students will be able to demonstrate knowledge of cultural worldview frameworks.
- Students will be able to demonstrate cultrual awareness of own culture and that of others.

**Gender Studies**

Students are required to take one unit from the list of courses approved as satisfying the gender studies requirement (see www.albion.edu/registrar/). Many of these courses also will satisfy a requirement in a major, in a program or in a concentration. Each approved course meets the following criteria:

1. It must foster inquiry into the cultural construction of gender.
2. It must focus on the perspectives that gender brings to the discipline.
3. It must place the issues of gender in their historical context. This may include the rediscovery of marginalized texts.

**Student Learning Outcomes:**

- Students will be able to demonstrate an understanding of the cultural construction of gender.
- Students will be able to understand the perspectives that gender brings to the discipline.
- Students will be able to analyze knowledge from relevant text within a historical/cultural context.

**Global Studies**

Students have two options in fulfilling this category. (1) They may successfully participate in any approved off-campus study program outside of the United States (or the Border Studies Program) for at least one semester and submit a journal reflecting on their experiences. Detailed journal requirements are available at the Center for International Education. International students may fulfill the global category by submitting a journal, subject to the same requirements, reflecting on their experiences at Albion. (2) They may take one unit from the list of courses approved as satisfying the global studies requirement (see www.albion.edu/registrar/). Many of these courses also will satisfy a requirement in a major, in a program or in a concentration. Each approved course meets the following criteria:

1. It must have as an organizing focus topics that are international (focusing on a particular region) or global (focusing on an issue pertaining to multiple regions or countries).
2. It must foster inquiry into the interconnectedness of international issues and students' lives.
3. It should attempt to bring the world into the classroom so that students learn how to function in an international environment and gain a deeper understanding of the world outside the United States.

**Student Learning Outcomes:**

- Students will be able to demonstrate an understanding of cultures or issues in the world outside the United States.
- Students will be able to consider their connection to global issues.
- Students will be able to consider worldviews, power structures and experiences of multiple cultures.

**Experiential Certificates:** **Students may choose to complete an experiential certificate.**

Experiential Certificates allow students to put their learning into action. By combining classroom instruction with experiential learning and professional development, students will be able to dive deeply into their passions and find purpose by making solid connections between the different types of learning they experience at Albion College. Experiential Certificates are open to all second year students and transfer students across campus. Students do not need to be affiliated with any specific department, institute, or center to participate.

The Experiential Certificates are a campus-wide initiative with coordination provided by the School for Public Purpose and Professional Advancement (SPP) at the Ludington Center, which is responsible for design, development, and execution of the Experiential Certificates. The purpose of the Experiential Certificates is to recognize and further enhance student learning that occurs beyond the classroom. Experiential learning and professional development opportunities are not bound by discipline but rather transcend disciplinary boundaries.

# Components:

**Purpose Workshops**

To help students identify their purpose and their path to an Experiential Certificate, Purpose Workshops will be offered each fall semester by SPP staff. These workshops will focus on student-led work to examine broad questions related to purpose, belonging, and an educational pathway that works for each student. Topic areas will be supported by a series of formative activities and assessments (e.g., to monitor student learning, to provide ongoing feedback) and summative activities and assessments that provide an opportunity to evaluate student learning and to inform the development of an Experiential Certificate. Each Purpose Workshop topic will be delivered multiple times to allow for students to work around their course schedules and take part in the process. Throughout the Purpose Workshop, students will work to develop a plan for their Experiential Certificate, including a list of potential Purpose Courses, professional development topics, and experiential learning opportunities. At the end of the Fall semester, students will have a complete Experiential Certificate application that will go to the Certificate Board for approval.

**Purpose Courses**

The exploration and learning that occurs in the classroom helps to build the foundation of knowledge that students can apply outside of the classroom in pursuit of Experiential Certificates. Students must designate at least three courses as Purpose Courses that would be a part of their Experiential Certificate. Purpose Courses must be chosen from existing courses offered by the College, or from courses that a student takes through an off-campus program (domestic study, study abroad, TPC, etc.).

- There is no upper limit on the number of Purpose Courses that can be designated by a student. The courses must combine to be a minimum of 2.0 units.

- Of these three courses, at least one course must be at the 200-level or higher so that students can build academic depth in their passion area.

    - Some 200-level courses have prerequisites that may or may not be included in the overall count of Purpose Courses.
    - Directed studies or tutorials, as approved by the Certificate Board, can be considered a Purpose Course.

- To be intentionally interdisciplinary, students are strongly encouraged to consider how courses from the arts, humanities, sciences, and social sciences could contribute to their Experiential Certificate.
- Purpose Courses can count towards a student's major, minor, or concentration.
- Courses that currently fulfill general education requirements, such as Modes and Categories, can be designated as Purpose Courses.
- Students must plan out their Purpose Courses during their Purpose Workshops.
    - Students must build an academic plan so that prerequisite courses needed for designated Purpose Courses are taken in advance and in proper sequence.
    - Only one previously taken course (prior to the Purpose Workshop) can be designated as a Purpose Course.

**Professional Development**

Professional development refers to "educational or training opportunities relevant to the professional's work" (WebCE). This type of training will give students the skills to become a valued team member in their future career. These opportunities will help students to build skills and competencies for their personal and professional growth.

Students will complete 200 total hours of professional development training that spans their second year through graduation. Professional development will occur across campus (e.g., Institute programming, Residential Life - RA training, FURSCA trainings, skill development through student employment, Admissions - tour guides, Athletics) and will allow students to tailor their training to the skills that they will need to fulfill their individual paths. Students may also take advantage of off-campus professional development opportunities, including programs offering professional certifications, credentials, and badges, either in person or online.

- The SPP staff will be responsible for approving, creating, updating, and maintaining a database that includes details about professional development opportunities available to students on campus and in the community.
- All approved professional development opportunities will be accompanied by clearly communicated learning outcomes and assessment metrics.

**Experiential Learning**

Experiential learning is hands-on, active learning followed by reflection on that learning. Experiential learning encompasses a wide range of "learning by doing" activities, including community engagement and professional learning opportunities offered by Albion College. This type of learning presents an excellent opportunity for a liberal arts education to be clearly, convincingly, and concretely connected to career readiness. Examples include

volunteerism, internships, community engaged learning courses, the Build Albion Fellows, FURSCA projects, and more. Experiential learning opportunities are also offered by the Institutes and Centers at Albion College.

Students will complete 750 total hours of experiential learning that spans their second year through graduation. At least 300 hours need to be part of a long-term experience. Some examples include a summer or semester internship, a project sponsored by FURSCA (e.g., summer experience, research/scholarship during the academic year), engagement through the Albion College Community Collaborative (AC3), leadership in student organizations, volunteer hours, or another off-campus experience (e.g., TPC, time in a research lab).

- At least 100 of the total 750 experiential learning hours also need to be focused on community engagement as outlined and approved by the Experiential Certificate plan. The Carnegie Foundation defines community engagement as "collaboration between institutions of higher education and their larger communities (local, regional/state, national, global) for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity." Community partners might include service or governmental organizations, businesses, research associations, or others.

- A common thread must link the experiential learning opportunities to the overall Experiential Certificate, and students must explain how the learning experience aids in fulfilling the goals outlined in their Experiential Certificate applications.

    - Students are required to articulate how the experiential learning opportunities they plan to pursue speak to and are in service to the focus of the proposed Experiential Certificate plan. Students must discuss how the proposed experiential learning provides unique opportunities to explore the topic through "learning by doing." Students will provide this explanation in the Experiential Learning Contract (ELC), which must be completed before any experiential learning opportunities can be counted toward the certificate requirement. In sum, the ELC will articulate the learning objectives of the experience, the activities connected to each learning objective, and the method of reflective assessment to be undertaken.

- The SPP staff will maintain a database of Experiential Learning opportunities available to students.

# Integrative Reflection

Learning is most effective when students are provided with a cognitive framework before they engage. The cognitive framework gives the students a scaffolding within which to "look" for learning as they engage and provides a way of organizing that learning.

- Each student will use a designated platform to document and reflect on each component of the Experiential Certificate.

- For each component (professional development, experiential learning, Purpose Courses, and Purpose Workshop), a reflective piece will be required. At the end of each year, students will be required to submit a "Year in Review" reflection and assessment write up. Students will be required to:

- Reflect on their experiential learning and professional development trainings (including Purpose Courses and Purpose Workshops if applicable in a given year),

- Articulate what was learned, why that learning is important, and how it ties back to the overall Experiential Certificate plan,

- Discuss how that learning will help them advance the plans they have outlined for the following year, and

- Connect that learning to professional and personal growth and development.

An advising team made up of both SPP staff and faculty will oversee the reflection process and give feedback about the integrative reflections. The final integrative reflective piece will require both a written and oral component. In the spring of their senior year, students will give public presentations about their Experiential Certificates. If their Experiential Certificate involves a thesis, art project, business plan, etc. that can be shared during that presentation as well. The written component will be a reflective piece that addresses the overall learning outcomes of the Experiential Certificate.

NOTE: Students will receive an invitation to an Integrative Reflection Senior Conference (IRSC) meeting with an appropriate Committee designee (e.g., Institute Director or Associate Director) in the fall of their senior year. In the IRSC, students will receive a timeline for stages of submission and review of their integrative reflections by SPP staff. The IRSC will approve the final integrative reflective piece (written) and sign off on the student presenting the material publicly. The granting of the Experiential Certificate won't occur until after the final public presentation is complete and approved by the IRSC.

# Experiential Certificate Approval System

The SPP is the administrative home for Experiential Certificates. Students will have a completed Experiential Certificate plan at the conclusion of the Purpose Workshop. The completed plan would then be sent to the Experiential Certificate Board for approval no later than November 1st. In order to receive approval, a student's Experiential Certificate plan must:

- Clearly articulate an intellectual interest of the student that is not readily met by existing curricular pathways,
- Outline a clear pathway, describing experiential and professional development options that fit the thematic focus of the Experiential Certificate,
- Make a compelling argument for why the elements presented complement each other and enhance the student's learning opportunities, and
- Appropriately evaluate any discordance or concordance with similar professional certifications so as to avoid any potential for confusion about the meaning of the Experiential Certificate.

#### Experiential Certificate Board - Approval Process

Management of the Experiential Certificate Board will be the responsibility of the Executive Director of the SPP. This body will include the director of each Institute/Center affiliated with the SPP, two faculty members, two students, and at least four other staff persons (two within the SPP and two in other campus organizational units) with roles central to the provision of experiential learning and professional development opportunities. The Experiential Board will receive and approve (or return for more clarification or adjustment) all Experiential Certificate proposals.

- Experiential Certificate applications will be submitted on two tracks:
    - Track 1- Asynchronous Review:
        - An Institute Director reviews and endorses a student-proposed Experiential Certificate.

        - The Institute Director enters the proposal in the tracking system for review.
        - The Certificate Board will then have 10 business days for electronic review (no meeting needed) before they vote on the proposal electronically.

- Track 2 - Full Review:
    - Proposals not reviewed and endorsed by an Institute Director require a meeting of the Certificate Board.

**The Writing Proficiency Requirement**

C&RC has approved revisions to the Writing Proficiency Requirement as follows:

**College Writing Proficiency Requirement**
Continuous development as a writer is a central part of a liberal arts education. All first-year students and new transfer students are required to take a written placement examination during orientation. The majority of students are placed into and encouraged to enroll in English 101, College Writing. Some students will be invited to enroll in English 101H, the honors section of College Writing. English 101 and 101H serve as prerequisites for all other English Department writing courses.

Those students who are placed into English 100, Writing Essentials must complete the class during their first full semester at Albion. A student placed into English 100 may drop or withdraw from the course only if diagnostic testing done the first week of class alters the student's placement. The class must be taken for a numerical grade.

Each year, a few students place out of first-year writing classes. During the sophomore year, these students may enroll in 200-level English Department writing classes.

In order to graduate from Albion, all students must demonstrate college writing proficiency by fulfilling one of the following requirements:

1. receive a 5 on the Advanced Placement Test in English Language and Composition;
2. receive a 5 or higher on one of the International Baccalaureate higher level English tests;
3. complete English 101, College Writing, or English 101H, College Writing Honors, at Albion College with a grade of 3.0 or above;
4. transfer a writing course that counts as English 101 at Albion College with a grade of 3.0 or above;
5. pass the Writing Competence Examination (see details below).

Students are encouraged to enroll in English 101 or 101H early in their college careers in order to practice and improve college writing as a means to support their learning across the liberal arts curriculum and to fulfill the college writing proficiency requirement.

Students who have completed 14 units or more, but who have not fulfilled the writing proficiency requirement will be required to register for classes in subsequent semesters with the sophomore class.

Transfer students who have completed 14 units or more (including transfer courses) will be expected to have completed the writing proficiency requirement before the start of their third semester at Albion College. If the writing proficiency requirement has not been fulfilled by the start of the third semester, the students will be required to register for classes in subsequent semesters with the sophomore class.

Exceptions to the class registration hold (delay) may be made for students who have been working regularly with the Director of Writing and are making progress toward fulfilling the writing proficiency requirement.

No student may receive a degree from Albion College without fulfilling the writing proficiency requirement.

**Writing Competence Examination**

Upon reaching sophomore status, any student who has not yet fulfilled the writing proficiency requirement as indicated above will be automatically registered for and required to take the Writing Competence Examination (WCE) during their sophomore year. Sophomores who do not pass on their first attempt—and have not fulfilled the writing proficiency requirement otherwise—will be automatically registered for and required to take the WCE again no later than the following semester.

Upon a second WCE failure, students must contact the Director of Writing and schedule a meeting to review their writing. After this consultation, the Director of Writing will require students to participate in appropriate writing practice, which may include tutoring and/or mandatory enrollment in English 101 as part of the writing proficiency requirement. Students must complete the assigned writing practice prior to attempting the examination again.

The WCE will be scheduled at least six times each academic year, and no special arrangements will be made for seniors who have not passed by the last examination.

**Class Registration Hold**

Students who have not yet fulfilled the writing proficiency requirement—and are not currently enrolled in ENGL 101 to fulfill the requirement—will not be permitted to complete class registration for the following semester if either of the following circumstances apply:

- Students have twice taken and failed the WCE
- Students have twice failed to take the WCE for which they were registered (*includes self-registration and mandatory sophomore registration*)

Students will be notified of the class registration hold on their account by the Registrar's office (via email, with a copy to the students' academic adviser). These notifications will be sent following each WCE during the semester, and at the beginning of each semester.

In order for the class registration hold to be removed, students must take appropriate actions as described in the writing proficiency requirement policies above: specifically, students who have twice taken and failed the WCE must contact and meet with the Director of Writing to review their writing, then participate in writing practice as determined by the Director; students who have twice failed to take the WCE for which they are registered must sign up and take the WCE at their earliest opportunity. *These actions must be completed prior to the end of classes for the current semester.*

After students complete the appropriate actions for their particular circumstances, the Director of Writing will notify the Registrar's office and the registration hold will be removed so that students can register for classes.

**The Major Requirement**

Albion College offers the following academic majors:

Accounting
Anthropology
Anthropology and Sociology
Art (Studio Art)
Art History
Athletic Training
Biochemistry
Biology

Business and Organizations
Chemistry
Communication Studies
Earth Science
Economics and Management
English
Environmental Science
Environmental Studies
Ethnic Studies
Exercise Science
Finance
French
Geological Sciences
German
History Individually Designed Major
International Studies
Mathematics
Mathematics/Economics
Mathematics/Physics
Music
Philosophy
Physics
Political Science
Psychology
Public Policy
Religious Studies
Sociology
Spanish
Sustainability Studies
Theatre
Women's and Gender Studies

The major requirement represents learning mastery in an area of specialization. Majors are possible in three separate areas—the departmental major, the interdepartmental or interdisciplinary major and the individually designed major.

**Departmental majors** include a maximum of 10 required units in an academic department as well as possible cognates within other areas. A student may declare two majors. **Interdepartmental majors** and **interdisciplinary majors**, with a maximum of 10 required units of course work plus cognates, are also offered.

**Detailed requirements for all of the majors listed above appear in the Programs of Study section of this catalog.**

# Individually Designed Interdepartmental Major (IDIM)

The individually designed interdepartmental major (IDIM) allows freedom of choice. Under this program, students have created their own majors in such fields as arts administration, cognitive science, Latin American studies, political economy, twentieth-century social philosophy, and public health.

A student desiring to propose an individually designed interdepartmental major has usually determined that certain combinations of courses from a variety of departments on the Albion campus will best fulfill his/her career goals. In many instances, that student's career training will primarily focus on the offerings of one department, or one faculty member, who is most knowledgeable in that career area.

1. The student should propose his/her ideas to a faculty member in the appropriate department for discussion and clarification. The faculty member should be willing to serve as the major adviser.

2. **IDIM proposals must be submitted before the student attains 25 units.**
3. The student and the major adviser should work together in selecting other faculty members who might be included on the student's major committee. The student should then enlist two of these faculty members to serve, with the major advisor, on the major committee. At least one member of the major committee shall be from outside the major adviser's department. If, for any reason, the membership of the major committee is altered, the student is responsible for securing replacements as well as for notifying the provost and the registrar of the change.
4. The major committee and the student shall then design in detail the nature of the curriculum to be followed for the IDIM. Individually designed interdepartmental majors **must** include: a minimum of eight units of course work **and** one unit of directed study whose purpose shall be to demonstrate the student's ability to perform independent scholarship or creative activity appropriate to the student's particular program. Typically, the student's major adviser will supervise the directed study. IDIM programs must be a minimum of nine units, including the directed study, and may not exceed 12 units.
5. **A student may not have completed more than half of the IDIM program prior to submission of the IDIM proposal.**
6. Before beginning the individualized program of study, the student must secure the unanimous approval of the major committee. The student should then submit the form to the Registrar's Office. The Registrar's Office will then send the form to the provost for approval. The student should include a proposal of the directed study which should show the role of the directed study in supporting the unique aspect of the IDIM and should be signed by the faculty member who will direct the proposed study. The provost will provide copies of the IDIM to the student, the major adviser and the registrar. A copy of the approved program and any subsequent approved changes will be kept on file with the registrar.
7. To revise an IDIM, the student must submit a new IDIM application with the changes in the program noted to the Registrar's Office. All of the changes to the IDIM must be approved by the entire major committee and the provost. The student must also file an explanation for the change in the original IDIM.

Detailed regulations and forms for filing an individually designed major are available from the Registrar's Office.

# The Minor Option

In addition to their major, students have the option of choosing a minor in a different area of specialization. Most academic departments offer at least one minor; specific requirements for the various minors are available from the departments.

Requirements in minors for students pursuing teacher certification are available from the Education Department. (Academic departmental minor requirements and the teaching departmental minor requirements may vary; students must contact the Education Department regarding specific requirements.)

Interdepartmental minors are also an option, offered through the cooperation of several academic departments. Students having specific questions regarding these minors should contact the Registrar's Office.

# The First-Year Experience

The William Atwell Brown, Jr., and Mary Brown Vacin First-Year Experience assists students in making the transition from high school to college. Through a broad array of academic and co-curricular programs, the First-Year Experience provides a foundation for students that will sustain them throughout their undergraduate years and that will enable them to achieve their academic and personal goals. The principal features of the program are described below.

# Academic and General Advising

The advising process begins during new student orientation and continues in periodic meetings with faculty advisers and Student Development staff during the first year.

# First-Year Seminar (LA 101)

Designed to introduce entering students to the liberal arts tradition, the First-Year Seminars nurture academic skills, creativity and active inquiry. Small class sizes ensure constant interaction among faculty and students. The seminars often address cutting-edge topics, and most include research projects or other hands-on learning experiences. Some feature an extended field trip, to a location in the U.S. or overseas, to give students a firsthand look at the issues they are studying.

Recent seminar topics have included: Genes and Society, Justice, Art in the Environment, Water: Science and Policy, the Holocaust, and Albion and the American Dream. The class schedule, available at www.albion.edu/registrar/, lists the seminars offered for the current academic year.

# Richard M. Smith Common Reading Experience

In the Richard M. Smith Common Reading Experience, students and faculty discuss a book and/or other academic works they have read during the preceding summer or at the beginning of fall semester. Past Common Reading Experience selections have included Tamim Ansary's *West of Kabul, East of New York*, Moises Kaufman's *The Laramie Project*, Michael Pollan's *The Omnivore's Dilemma*, and Rebecca Skloot's *The Immortal Life of Henrietta Lacks*. The Richard M. Smith Common Reading Experience is designed to establish the ideas of scholarship, critical thinking and academic expectations through a common learning experience, and begin student understanding of differences and cross-cultural issues in the context of the Albion College community.

# Academic Planning

Throughout their four years at Albion, students are encouraged to think about their career and personal goals, as well as the academic experiences that will enable them to reach those goals. After completing a self-assessment, students create a digital portfolio, which will eventually reflect their academic achievements; internship, research and other practical experiences; leadership accomplishments; and community service. Students utilize self-assessment tools to reflect their academic achievements; internship, research and other practical experiences; leadership accomplishments; and community service.

# Foundation for Undergraduate Research, Scholarship, and Creative Activity (FURSCA)

The Foundation for Undergraduate Research, Scholarship, and Creative Activity (FURSCA) was established to promote and support student research, original scholarship and creative efforts in all disciplines. Through a number of programs, taking place at all points in a student's career at Albion, FURSCA can help students pursue independent study in their areas of interest. Students work closely with a faculty mentor to develop and carry out research or other creative projects. Participation in such projects provides valuable experience beyond the scope of classroom work, and enhances a student's preparedness for future employment or graduate studies. Some examples of FURSCA programs are listed below.

**Student Research Partners Program**—Geared toward first-year students, this program pairs a student with a faculty mentor to work on a project related to the faculty member's research or creative area. Students gain hands-on

experience with scholarship in a specific field, and may elect to continue during their sophomore year. Participation is selective, based on high academic achievement, and stipends are awarded.

**Semester Research Grants**—Students may apply for funds to support research or other creative projects. Students must work closely with a faculty adviser; however, projects are not limited to any particular discipline. Grants may be awarded to pay for supplies, printing costs, subject payments, software or other costs associated with completion of the project.

**Conference Grants**—Students are awarded travel funds to help cover expenses associated with travel to attend professional meetings at which they will present the results of their research or creative projects.

**Summer Research Fellowships**—A select number of students may remain on campus during the summer, earning a stipend, to work on research or creative projects. In addition to working closely with a faculty adviser, students participate in weekly seminars with other students in the program.

**Elkin R. Isaac Student Research Symposium**—This annual symposium features student research and creative projects from the preceding year. Held each spring in conjunction with the Honors Convocation, this day-long event includes guest speakers and showcases the excellent creative work done by Albion College students.

For further information about FURSCA and its programs, see the FURSCA Web site, www.albion.edu/fursca, or contact the Director of FURSCA, or Starr Weaver, FURSCA coordinator.

# Institutes, Programs and Centers

# Prentiss M. Brown Honors Program

The Prentiss M. Brown Honors Program is designed for students interested in challenges and opportunities that go beyond those offered by traditional lecture and laboratory courses. Through small discussion-based classes, field trips, retreats, guest lecturers, independent research and individualized faculty mentoring, the Program provides a stimulating variety of academic experiences for talented students. All Brown Honors Program graduates culminate their academic experience with an extensive research or creative project. Participation in the Program may be combined with any major and with any of Albion's career preparation programs in law, medicine, public service, environmental science, or business management.

**Academic Program**—The academic requirements and course descriptions for the Honors Program appear in the Programs of Study section of this catalog.

**Special Features**—The Prentiss M. Brown Honors Program Center is located in the historic Observatory building and contains a seminar room for Honors classes, the Honors Assistant Director's office, as well as meeting, library, computing and study areas for Honors students and their guests. Finally, the Program provides Honors students with opportunities to attend popular cultural attractions, have special access to distinguished campus visitors, and to plan and run a variety of other social and intellectual activities through participation in the Honors Council.

**Admission**—Albion's Brown Honors Program accepts applications from students who show superior academic promise. Recognizing there is no one criterion by which academic potential is measured, the Honors Committee annually selects a group of applicants whose high school records, scores on national tests, essays and personal interviews indicate exceptional promise. Currently enrolled Albion College students, as well as high school seniors, may apply for admission to the Program. Contact the Brown Honors Program Assistant Director at honors@albion.edu for more information.

Apply to the Brown Honors Program.

# Institutes and Centers

Albion's Institutes and Centers integrate theoretical and practical learning in distinctive and challenging ways. Intended for students who desire preprofessional preparation and academic work focused in a specialty area, the Institutes and Centers each have a specific curriculum and may include an internship, a capstone experience and opportunities for independent research. Successful completion of an Institute or Center's program, which is noted on the student's academic transcript, confers an advantage in gaining admission to graduate or professional school or in beginning a career.

# Gerald R. Ford Institute for Leadership in Public Policy and Service

The Gerald R. Ford Institute for Leadership in Public Policy and Service assures highly qualified students a broad liberal arts education with concentrated study in the areas of public policy and public service. Special emphasis is given to problem-solving, decision-making and leadership. The Institute carries out President Ford's vision of training the next generation in the importance of public service in its myriad forms.

**Academic Program**—The academic requirements and course descriptions for the Ford Institute concentration appear in the Programs of Study section of this catalog. The academic aspect of the Ford Institute allows students of any major to graduate with an understanding of how public policy is made and how it impacts all aspects of American society. The program requires students to complete a one-unit internship in public service.

**Activities**—Students participate in a range of academic and social activities designed both to expand their understanding of public service and to enhance their ties with others who share their interest in community engagement. Most notably, students complete a customized internship that enhances their job prospects and allows them to work in places as diverse as Washington, D.C., Europe, Africa or closer to home. Students also have opportunities to meet and interact with visitors to campus, including many who are world-renowned scholars, elected officials, researchers or business CEOs. Past visitors have included United States senators, ambassadors, governors and members of Congress, as well as civil rights leaders, famous scientists and business leaders. Students also are provided with opportunities to engage in community service projects with leading organizations in Albion, Detroit, throughout Michigan and around the world.

**Admission**—Students are admitted to the Ford Institute only after being admitted to Albion College. Admission to the Ford Institute is selective. Participants are selected based on their proven leadership, interest in public service, academic ability and previous involvement in political, community and school activities. All students are expected to maintain a high level of academic performance and, once admitted, to continue their involvement in campus and community affairs and to become involved in Institute activities. Contact the Ford Institute director at fordinstitute@albion.edu for more information.

Apply to the Gerald R. Ford Institute for Leadership in Public Policy and Service.

Contact the director for more information.

# Carl A. Gerstacker Institute for Business and Management

The Carl A. Gerstacker Institute for Business and Management encourages students to explore the practical and dynamic subject of business from many perspectives. The Institute offers a concentration with two sets of requirements: one for students pursuing majors from the Economics and Management department and the other for

students pursuing any other major. This concentration recognizes that students with different majors begin with different backgrounds in the fundamentals of management. The course work is enhanced by developing critical thinking and leadership skills through other opportunities such as Gerstacker Institute speakers, networking with business executives and participation in the first-year workshop, sophomore summer school, internships and the senior capstone experience. The required internship, available in diverse work settings, allow students to experience various career paths and to put their education into practice.

**Academic Program**—The academic requirements and course descriptions for the Gerstacker Institute appear under the Gerstacker Institute in the Programs of Study section of this catalog.

**Activities**—Members of the Gerstacker Institute participate in workshops aimed at building a professional portfolio, developing career search skills, and practicing proper business etiquette. In addition, the Institute regularly hosts speakers from a variety of fields who share their experiences with students, often one-on-one. Regular participation in these activities is a requirement for continued membership in the Institute.

**Admission**— Students must be admitted to the Gerstacker Institute to pursue this concentration. Visit the Gerstacker Institute website for information on the application process.

Students admitted to the Gerstacker Institute may be considered for scholarships which are separate from other aid awarded by Albion College. These scholarships may be renewable each year for up to four years, contingent on a continued high level of academic performance and significant participation in Institute activities.

Due to the limitations on space and the strong interest in the Institute, early application is advised.

Contact the Gerstacker Institute director at gerstacker@albion.edu for more information.

Apply to the Carl A. Gerstacker Institute for Business and Management.

Contact the director for more information.

# Lisa and James Wilson Institute for Medicine

Albion College's pre-health professions program has an excellent reputation for providing academic preparation for students wishing to enter healthcare professions, including medicine, dentistry, veterinary medicine, physician assistant, nursing, physical therapy, occupational therapy, optometry, pharmacy, and public health. The Wilson Institute for Medicine supports and enriches the undergraduate education experience of healthcare students by providing academic and career advising, offering health-related courses, and sponsoring workshops, speakers, volunteer and internship opportunities, and a variety of special programs.

By introducing students to key issues in healthcare and focusing on students' interpersonal competencies as well as their academic competencies, the Institute offers students their critical first steps toward becoming well-educated, compassionate medical professionals.

**Academic Program**—Students are required to complete the appropriate prerequisite courses for the professional school they plan to attend. Pre-health students can major in any field and are encouraged to explore the full range of liberal arts course offerings in subjects including anthropology, sociology, economics, art, art history, psychology, history, philosophy and many other fields. To graduate as Institute members in good standing, students need to complete Introduction and Issues in Healthcare, a documented experiential learning project, and community service as well as maintain a GPA of 3.0. To graduate with distinction, Institute members must assume a leadership role in the Institute, be eligible to join Alpha Epsilon Delta, the health preprofessional honor society, and achieve a GPA of 3.5.

**Admission**—Prospective members usually apply for admission to the Institute during the process of applying for admission to Albion College by completing four brief essays about their healthcare interests and experiences. However, students may also apply during their first year of studies or upon transfer to Albion College. Once admitted, students

are expected to maintain a high level of academic performance, to continue to explore the healthcare field, and to participate in Institute activities.

Contact the Wilson Institute for Medicine director at ihp@albion.edu for more information.

Apply to the Wilson Institute for Medicine.

# Fritz Shurmur Center for Teacher Development

The distinctive focus of the Fritz Shurmur Center for Teacher Development is to link the Albion College Teacher Education Program to the Albion Public Schools and other area schools in innovative and exemplary ways. This intentional engagement with area schools will enhance the preparation of Albion College's prospective teachers and provide opportunities for a rich multicultural experience and a more meaningful involvement with policy issues.

With support from the Fritz Shurmur Center for Teacher Development, graduates of the Albion Teacher Education Program will become superior teachers—well-versed in their subject areas, highly skilled in developing knowledge with their students and dedicated to engaging their students in lifelong learning. Additionally, the Shurmur Center's research and scholarship activities, such as the Shurmur Mentorship Practicum and public issues forums, create opportunities for prospective teachers to become knowledgeable about, and involved in, educational reform at the local, state and national levels.

**Academic Program**—The academic requirements and course descriptions for students in the Teacher Education Program appear under the Education Department in the Programs of Study section of this catalog.

**Activities**—In addition, the Fritz Shurmur Center for Teacher Development sponsors nationally known speakers for the student teaching capstone lecture, offers public roundtable discussions focused on topics related to education and public policy, and supports field trips to different educational settings to allow students to experience different models of educational practice in other regions of the country or the world. In conjunction with the Ferguson Center for Technology-Aided Teaching and Learning, students are encouraged to thoughtfully integrate the use of technology into their teaching and develop pilot projects, symposia and other structured study with academic technology.

**Admission**—Students with sophomore standing, who demonstrate both a strong intellect and an ethic of caring as well as successfully complete the two pre-admission courses (EDUC 202, EDUC 203) and the application, are eligible for admission. Applications are reviewed by faculty and staff of the Education Department and the Fritz Shurmur Center for Teacher Development. Similarly qualified students may also be admitted after the second year. Students interested in the Teacher Education Program are advised to fill out an interest form in the Education Department Office in Olin Hall. Contact the coordinator of the Shurmur Center for more information.

# Center for Sustainability and the Environment

The Center for Sustainability and the Environment encourages students to understand the environment and the human place in it by combining the intellectual tradition of the liberal arts with the practical experiences gained in internships and research projects. The Center's majors and concentrations in environmental science and environmental studies and its major in sustainability studies allow students to explore environmental questions through participatory learning and research in preparation for graduate studies and/or careers in regulation, remediation, policy formulation, education and the law. The Center also sponsors internship opportunities, service projects, seminars and travel experiences designed to confirm the relationship between the liberal arts and environmental concerns.

**Academic Program**—The academic requirements and course descriptions for the majors and concentrations offered through the Center for Sustainability and the Environment appear in the Programs of Study section of this catalog.

**Activities**—The Center sponsors several other opportunities for student enrichment, including field trips, student research and service projects, a student farm and a seminar program. The Center offers an annual field trip to see

important ecosystems within the United States, and human impacts on these systems. To support student research, the Center provides stipends for students who elect to spend the summer on campus working on independent research or service projects. The bi-weekly environmental seminar provides an opportunity for students to hear about other students' research and internship experiences, recent graduates' experiences in work and graduate school, faculty lectures on environmental topics, and senior professionals' reflections on their careers. Albion is an affiliate member of the School for Field Studies, which offers environmental field studies in Australia, Buthan, Cambodia and Vietnam, Costa Rica, East Africa, Panama, Peru, and Turks and Caicos Islands.

**Admission**—Students must apply for admission to the Center and the majors and concentrations that it sponsors. Normally this step is taken as part of the application process to the College, and most members are admitted as incoming students. Students may also apply during their first two years at the College. Contact the director of the Center for Sustainability and the Environment at environment@albion.edu for more information.

Apply to the Center for Sustainability and the Environment.

Contact the director for more information.

# Concentrations

A concentration is a program of study taken in addition to a major. The purpose of a concentration, which includes an internship, is to help a student explore specific career possibilities within the framework of a liberal arts education. Six to eight units are normally required for a concentration, including all course work and the internship.

## Environmental Science, Environmental Studies

See Center for Sustainability and the Environment under Programs of Study section.

## Human Services

See Human Services under Programs of Study section.

## Management for the Professions Concentration

See Carl A. Gerstacker Institute for Business and Management under Programs of Study section

## Law, Justice, and Society

See Law, Justice, and Society under Programs of Study section

## Neuroscience

See Neuroscience under Programs of Study section.

## Public Policy and Service

See Gerald R. Ford Institute for Leadership in Public Policy and Service under Programs of Study section.

# Other Internship Opportunities

Students may complete full-time internships ranging from working on a newspaper to serving as a pastoral care assistant in a hospital. Online internship postings, along with national directories, are maintained by the Career and Internship Center. Students should consult with the Career and Internship Center, and career development professionals will assist in exploring internship possibilities. Although a number of concentrations have required internship components, internships may be taken by students from all majors.

Students work under the joint supervision of a faculty member and a qualified professional in the field. Before registering for a specific internship, the student must have an appropriate faculty supervisor. See the Academic Regulations and Off-Campus Study sections of the catalog for more details. Internships are offered on a credit/no credit basis only. Up to four units of internship credit may be counted in the total required units for graduation.

# Preprofessional Health Programs and Internships

See also the Institute for Healthcare Professions

## Medicine, Dentistry and Veterinary Medicine

Albion College maintains a strong program for the preparation of students for admission to professional schools in medicine and dentistry. A premedical, pre-veterinary or pre-dental student may major in any discipline in which he or she has interest and ability. Most of our students choose to major in biology or chemistry, but any major may be pursued, as long as the basic science and other requirements of the health professions schools are met. Regardless of the major chosen, the premedical, pre-veterinary or pre-dental student should plan to take the following minimum required courses. All science courses require laboratory work.

Biology, one year (BIOL 195, BIOL 210) *
Inorganic Chemistry, one year (CHEM 121 , CHEM 123 )
Organic Chemistry, one year (CHEM 211 , CHEM 212)
Biochemistry, one semester (CHEM 337 or BIOL 337 )
Physics, one year (PHYS 115, PHYS 116)
Math, one semester (MATH 125: Precalculus (Functions), MATH 141: Calculus of a Single Variable I, and/or MATH 209: An Introduction to Statistics)
English, one year (ENGL 101 or 203-composition and one English literature course)
Additional humanities and social science courses required by many professional schools

* Most professional schools also require at least one upper-level biology course. Be sure to consult with the Institute for Healthcare Professions about the prerequisite course work required for professional schools you are considering. All new members of the Institute are issued an Institute Advising Guide during Albion's Student Orientation, Advising, and Registration (SOAR) program which includes detailed information about applying to professional school.

## Allied Health Professions

Albion College maintains courses appropriate for preparing students for admission to programs in physician assistant, nursing, physical therapy, occupational therapy, optometry, pharmacy, and public health (please note this is not an exhaustive list). Unlike medical, dental, and veterinary schools, these programs are quite varied in their requirements. Be sure to consult with the Institute for Healthcare Professions about the prerequisite course work required for

professional schools you are considering. All new members of the Institute are issued an *Institute Advising Guide* during Albion's Student Orientation, Advising, and Registration (SOAR) program which includes detailed information about applying to professional school.

# General Information

For many healthcare professional schools, prerequisite course work should be completed by the end of the junior year in preparation for taking the admissions test for professional schools unless you plan to take a transitional year between graduating from college and beginning your graduate training. Please note that healthcare students are expected to take courses in the arts, humanities, and social sciences as well as the natural sciences. In planning their Albion course work, students should check the current admission requirements of specific professional schools in which they are interested.

Experiential learning is also very important. In addition to their regular courses, a number of preprofessional students take advantage of the undergraduate practicum/internship program offered by Albion College. All members of the Institute for Healthcare Professions are required to complete at least one 40-hour documented experiential learning project (DELP). All these programs allow students to gain firsthand experience in the hospital, clinic, or offices of a supervising physician, dentist, or other professional, and thus expand their understanding of the profession of their choice. Interested students should consult the staff of the Institute for Healthcare Professions for more information.

Students considering a healthcare profession should apply to the Institute as well as to Albion College. Beginning at SOAR and continuing throughout students' college experience, the Institute staff works with students in long-range curriculum planning. The Institute also provides students with information and assistance while they are preparing for and applying to professional schools.

# Combined Preprofessional Courses

Students planning professional careers are urged to complete a bachelor's degree from Albion before entering a professional school. Albion has, however, established "combined course" arrangements with a number of accredited professional schools in career areas such as engineering, health sciences, natural resources and public policy. A student who has met both Albion's requirements for the combined course program and those established by the particular professional school enters the professional school at the end of his or her junior year at Albion College. After the successful completion of the equivalent of 7.5 units, the student qualifies for a bachelor of arts degree from Albion. After completion of the professional program, the student qualifies for the professional degree from the other school or the opportunity to earn certification. Students may obtain information on approved combined course programs from the registrar.

# Albion College Requirements for Combined Courses

In order to qualify for the combined course arrangements, the student must:

- Complete at least 23 units of college credit, 15 units of which must be earned at Albion.
- Maintain a minimum cumulative average of 2.5.
- Complete the core requirement, the writing proficiency requirement and a minimum of four units toward a major.
- Make application in writing to the registrar for the combined course privilege. This application must be submitted during the junior year and receive the endorsement of the Academic Status and Petitions Committee. Application forms are available in the Registrar's Office.

In addition to the general requirements above, the student should make sure that the requirements for admission to the professional school of his/her choice have been met.

# Dual-Degree Program in Engineering

Students in the dual-degree program in engineering typically spend three years at Albion and develop a strong background in science and mathematics, gaining this knowledge in a liberal arts-focused environment. They then transfer to an engineering school and usually complete an additional two years of study. (Albion has a formal arrangement with Columbia University and a longstanding relationship with the University of Michigan)

Students graduate with two degrees: a B.A. from Albion (typically in physics, or mathematics), and a B.S. degree in engineering from the transfer school.

**Academic Program**—The academic requirements for the dual-degree program in engineering appear in the Programs of Study section of this catalog.

**Admission**—Students in the dual-degree program in engineering have a strong background in mathematics and science, very good academic performance, and a desire to pursue the engineering profession. To be eligible for program admission, students must declare the dual-degree engineering major in either mathematics or physics, write a personal essay, complete a personal interview with the program director, and have at least a 2.5 overall GPA, as well as at least a 2.5 GPA in completed courses in the science division. Although these program admission requirements should normally be completed by the end of a student's first year at Albion, late admission requests are considered by the Engineering Advisory Committee as needed.

Apply to the dual-degree program in engineering.

Contact the director for more information.

# Health Sciences

Students may pursue combined course plans through accredited programs in dentistry, pharmacy and nursing. A number of professional schools offer dual-degree programs that can be arranged with permission of Albion's registrar. See the Institute for Healthcare Professions section for more information.

# Natural Resources Areas

Albion College maintains course arrangements with the Nicholas School of the Environment at Duke University. A student in the 3-2 program, upon completing all requirements, will receive the bachelor of arts degree from Albion College and one of two master's degrees from Duke University. The Duke University School of the Environment offers nine programs under two degrees. The forest resource management program is offered under the master of forestry degree. The other eight programs (coastal environmental management, conservation science and policy, environmental economics and policy, ecosystem science and management, energy and environment, environmental health and security, global environmental change, and water and air resources) are offered under the master of environmental management degree. Two certificate programs, energy and environment and geospatial analysis, can be pursued with any of these degree programs.

# Off-Campus Study

Albion students may participate in a wide variety of off-campus study, study/internship, or study/research programs throughout the world and in the United States. These opportunities are designed to enhance a liberal arts education through developing interpersonal or cross-cultural skills, awareness of other cultures or an appreciation of the work environment.

Students in any major may choose to study off-campus. Some students study away for one semester; others select two different semester-long programs or spend an academic year abroad on one program. Finally, some students participate in summer programs. Please contact the Center for International Education (CIE), Vulgamore Hall 306, for more information.

# Policies and Procedures

## Eligibility Requirements

The requirements for study off-campus are as follows:

- Albion Residency Requirement. Students who have attended three semesters as a full-time student at Albion College, excluding summer term, and with a minimum of 11 Albion College earned units, are eligible to participate in an approved off-campus program through the Center for International Education or the Career and Internship Center. Transfer students who have junior standing (14 – 20 earned units), are eligible to participate in an approved off-campus program through the Center for International Education or the Career and Internship Center after attending two semesters as a full-time student at Albion College, excluding summer term.

- A cumulative grade point average of 2.7. Some programs require a level of preparation and a demonstrated proficiency well above a cumulative grade point average of 2.7. A student interested in a particular off-campus program should confirm that he or she has the necessary qualifications either with the program adviser or the director of the CIE.

- Demonstrated maturity commensurate with the demands of the off-campus program.

- Successful completion of the Writing Proficiency Requirement before attending an off-campus program.

- Good social standing (as determined by the Office of the Vice President for Student Development).

Meeting these minimum qualifications does not entitle a student to participate in the program. Additional procedures are available on the Center for International Education website.

## The Application Process

Application deadlines are October 1 for spring semester and March 1 for fall, academic year, and summer programs. In their sophomore year, students are encouraged to obtain information and consultation about off-campus programs from the Center for International Education (CIE), the Career and Internship Center (CIC) for domestic internship programs, and from academic advisers and faculty advisers to the individual programs. Students need to consider carefully how an off-campus program fits into their studies at Albion. All prospective off-campus study students must meet with the director of CIE (for international programs) or the staff of CIC (for domestic programs). After selecting the appropriate off-campus program, a student then begins the application process.

There are two applications, one for Albion College and one for the specific off-campus program. The Off-Campus Programs Advisory Committee, composed of administration and faculty representatives from each of the four divisions of the College, approves or denies permission for off-campus study. The CIE or CIC then communicates with the appropriate programs. An off-campus program may accept or deny a student's application. However, in most cases, a student who is approved by Albion has been accepted by the off-campus program.

Once a student is accepted for off-campus study, he or she must complete post-admission requirements. This includes, but is not limited to, attending two mandatory pre-departure orientations.

# Cost

Tuition for semester and year-long off-campus programs usually does not exceed what a student pays for regular tuition on campus. However, when costs exceed those of Albion College's regular fees, students will be required to pay the difference. Note: Fees for most summer programs are higher than Albion's, and students will be charged the higher amount. Students are billed through Albion College and must have paid the amount in full prior to beginning the off-campus program. Other important items to note about costs for off-campus study include:

- There is a one-time per program off-campus administrative fee that is added to the regular Albion fees. (Please go to the "Tuition and Fees" section for details.)
- Costs for transportation to and from an off-campus study program are the responsibility of the student.
- Financial aid applies to all semester and academic-year off-campus programs on the list of programs approved for Albion credit. This aid includes merit-based academic scholarships (75% of regular award amount) and need-based financial aid (100%). Please contact the Student Financial Services Office about your specific award package. (Note: Albion financial aid is not available for summer programs.)
- Check the Off-Campus Programs Web site for information about additional aid for off-campus study, i.e., Albion College off-campus program grants, federal grants, and links to a study abroad scholarship search engine.
- Deferred payment plans such as Academic Management Services are not available for off-campus programs.

# Credit and Grades

- Academic and internship credit for Albion College-approved off-campus programs will transfer back to the campus as if the student were on campus. Usually, the equivalent of 4.0 units of credit per semester and 8.0 units of credit per academic year will apply. However, some programs may have more or less credit.
- Students may count up to two semesters and one summer session of off-campus study toward graduation. Off-campus units may not exceed 10.0 Albion units.
- Students attending an Albion-approved program or a program approved on a one-time-only basis must attend the program as an Albion student to receive credit.
- All off-campus courses will be taken for numerical grades, unless the student specifically requests, in writing, grades of credit/no credit.
- All internships are graded credit/no credit.
- Successful completion of an off-campus program abroad (or the Border Studies program) for at least one semester, along with successful completion of a journal requirement, fulfills the global studies category requirement.
- Off-campus semesters are not considered when determining eligibility for the Dean's List and/or Albion Fellows recognition.
- Students may complete core requirements while attending an off-campus program only if they obtain written authorization in advance from the registrar.

- For category requirements, the chair of the appropriate category committee must approve an off-campus program's course for that category requirement. Students must petition the category committee for approval before attending the program.
- Courses taken for a major or for teacher certification must be taken for a numerical grade unless written permission for a credit/no credit grade is obtained in advance from the department chair.
- Participating in an off-campus program during the last semester of the senior year may delay graduation.

Students who fail to follow College procedures regarding off-campus study, or who withdraw or take a leave of absence from Albion and thus circumvent existing College regulations regarding off-campus study, will not receive credit for course work done off-campus.

Albion College will not endorse a program or offer credit for courses or programs that are located in areas under a travel warning by the United States Department of State. Exceptions to this may be granted by the College president on the recommendation of the provost and director of the Center for International Education.

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# Reentry

There is a reentry orientation session for students returning to Albion from off-campus programs. The CIE and faculty work with returning students to help them integrate the knowledge and skills gained during their experience into their campus academic program.

Once the returning student has finished all the necessary course work on the off-campus program and completed the post-program evaluation/assessment forms, credit from the program is transferred to the student's Albion College record. With proper planning, a student should not lose any time toward graduation.

# Center for International Education (CIE)

The mission of the Center for International Education is to promote intercultural communication and exchange, cross-cultural understanding, and transnational competence between the people of Albion College and the global community. The CIE coordinates more than 100 off-campus study, research and academic internship programs in about 40 countries plus the U.S.

Albion-approved study abroad programs are available in Africa, Asia, North, South and Central America, the Carribean, the Middle East, and Australia/ Pacific Islands. To see a full list of off-campus programs approved for Albion credit, suggested by major, visit the Off-Campus Programs website.

The Center for International Education provides a variety of individual advising options for students who wish to study abroad. These sessions include program selection, choosing off-campus classes that meet the student's academic needs, estimating study abroad costs and creating budgets, providing travel know-how, and assisting with general visa advising. Students may set up an advising appointment by visiting the Center for International Education website.

# Summer College

Albion Summer College offers undergraduate courses taught by members of the Albion College faculty. As during Albion's regular school year, the program features personal attention, small classes and modern educational facilities—but at less cost.

Albion Summer College offers opportunities to currently enrolled Albion College students to accelerate academic programs, to relax a tight course schedule, or to raise grade point averages. Guest students from other colleges are welcome.

All academic policies are enforced during summer school.

Questions concerning the Albion Summer College should be addressed to: Registrar's Office, Albion College, Albion, Michigan 49224.

# Library Services

The Stockwell-Mudd Libraries support the mission of Albion College by providing exemplary research services and resources to students, faculty and staff.

Our extensive print and electronic collections provide access to a wealth of scholarly information through subscription and open access databases, journals, and streaming services. Seamless access to our physical and electronic collections is made possible with LibrarySearch, our next-generation Library Management and Discovery System. Resources not available locally can be quickly and easily obtained from other libraries through MeLCat or interlibrary loan. Access Library services and resources through our website at library.albion.edu.

The Stockwell Memorial Library (1938) includes The Cutler Center for Student Success, quiet and group study spaces, the popular Read Between the Grinds Cafe, and the United Methodist Church Western Michigan Conference Archives.

The Seeley G. Mudd Learning Center (1980) houses the Library Services desk, the Library computer lab/classroom, interactive and private study spaces, study rooms, the College Archives and Special Collections, Instructional Technology, and the Innovation Lab.

The highly skilled Library staff is dedicated to providing exceptional customer service. Librarians are available to provide research assistance through in-person and virtual appointments, online via chat or email, or by phone. Librarians promote partnerships between academic departments and the Library in order to develop high-quality collections and provide a variety of library instruction services to support the College's liberal arts curriculum and promote information literacy. Library instruction services include general library orientation and information literacy sessions, course-specific and assignment-specific library instruction, and course-embedded library instruction.

Contact the Library by emailing library@albion.edu or calling 517-629-0382.

# Information Technology

Albion College has been recognized as a leader in providing technology resources and support to students, faculty and staff. The Information Technology staff provides superior technical skills and customer service to the campus community.

Powering Albion College's high-speed network is a fiber optic dual-Gigabit Ethernet backbone that extends to every residence hall room, public lab, faculty office and classroom. In addition, the College has a wireless network with significant campus coverage. These networks are connected to the Internet via a fractional T3 line. Windows-based

computers are the campus standard, although other types of workstations are used for specific applications. All students, faculty and staff members are automatically provided network accounts that allow them access to e-mail, file and World Wide Web page storage. Graduating students are provided with a lifetime e-mail account. As part of campus agreements, students receive updated Microsoft Office Suite and anti-virus software. Technical assistance can be obtained from the Help Desk, or from student technology assistants in the evening hours in the library.

Public computer facilities are available in Olin Hall and Putnam Hall, and an advanced technology computer lab in the Ferguson Student, Technology, and Administrative Services Building is equipped with digital imaging, digital video and wireless capabilities. Dell and Macintosh laptops are available for signout in the Stockwell-Mudd Libraries and in Information Technology in the Ferguson Building. Specialized computing facilities dedicated to particular departments, residence hall computer labs and technology-enhanced classrooms, are located throughout the campus. In addition to classrooms with installed computers and projection, portable media systems supporting classroom instruction are also available in a number of campus locations.

The Instructional Technology department provides support for faculty, staff and students in their use of technology to enhance teaching, learning and research. The department supports a media development lab for those requiring assistance with digital imaging and digital video editing projects, and loaner equipment such as laptop computers, projectors and digital cameras. Online training is available throughout the year to introduce the computer and network systems, Microsoft Office applications, e-mail, graphics, Web use, and to provide advanced information on specific topics.

Administrative computing systems run on Ellucian's Banner, based on the Oracle database system. Most of the College's business applications are run in the Banner system, including registration and student records, finance, financial aid, human resources and institutional advancement. In addition, Web interfaces to Banner are provided for students, faculty and staff.

Information Technology is committed to providing appropriate technology resources and support to meet student, faculty and staff needs. Detailed information on services is available at www.albion.edu/it.

# Academic Skills Center

The Academic Skills Center (ASC), located in the Mudd Learning Center, provides students with a wide range of support for learning inside and outside the classroom in all academic areas. Students can get assistance with learning strategies, quantitative study, and writing in one of the ASC's three centers. In addition, study tables offer scheduled times for drop-in help with many introductory courses, and peer tutors can be requested in most academic areas. See the ASC website (www.albion.edu/asc/) for current information on study tables, to submit requests for peer tutors and to request a study strategy appointment with ASC staff. All services of the Academic Skills Center are free to Albion College students.

# Quantitative Studies Center

The Quantitative Studies Center provides support for students in all disciplines. Frequently addressed issues include applications of mathematics, logic or statistics in various courses and specific strategies for approaching college-level mathematics courses. The resources of the Center include a collection of mathematics texts that students may check out and a set of computerized self-paced tutorials in algebra and trigonometry that students may use at their convenience. Students can receive help on a drop-in basis, and those desiring long-term one-on-one tutoring in math can be paired with trained student tutors. In addition to these services, the Quantitative Studies Center sponsors a series of workshops. Recent workshops have included such topics as using graphing calculators, solving story problems, overview of important calculus concepts, and preparing for graduate school entrance or teacher certification examinations.

# Writing Center

The Writing Center supports every writer at Albion College: our goal is to support students as they work to become better at their craft, from the novice to the already experienced writer. Peer consultants at the Writing Center support writers by responding to thinking and writing in process. Writing consultants work one-on-one with student writers to discuss and brainstorm ideas, develop writing plans that meet assignment goals, troubleshoot research or citation questions, and review rough draft writing at any stage. Consultants welcome and work with students and student writing from across the campus, in a variety of academic disciplines, as well as assisting students with other kinds of academic or professional writing (e.g., cover letters for internships, resumes for job applications, personal statements for scholarships or graduate school).

# Learning Support Center

## Learning Support Center

Learning Support Center staff meet with students who want to improve and adopt effective academic strategies. Common student goals include managing time, mastering procrastination, preparing for exams, and planning ahead. First-year students often seek assistance from the center to bring their study skills up to college level; later these students may continue to utilize the center to "fine-tune" their skills for meeting the demands of upper-level courses. Students may request appointments at any time of the semester.

# Disability Services and Accommodations

The Learning Support Center (LSC) coordinates services and accommodations for students with disabilities. These services are provided in accordance with the 2008 amendments to the Americans with Disabilities Act as well as section 504 of the Rehabilitation Act of 1973 and are intended to remove barriers to participation in the college environment. Sources and forms of documentation for substantiating a student's disability can take a variety of forms, including a student's self-report, the observation and interaction with staff of the LSC and information from outside sources. Decisions regarding appropriate accommodations are made through an individual review between the head of the LSC and the student. Reasonable accommodations and services commonly requested include extra time on examinations, distraction-free test locations and classroom note-takers. Course modifications or auxiliary aids that constitute a fundamental alteration of a course or program of study are not extended through the ADA.

# Career and Internship Center

The mission of the Career and Internship Center is to guide and inspire Albion College students to be actively involved in their personal and career development throughout their academic and professional career. The office creates a supportive career-readiness community of faculty, parents and advisers that equips students to lead lives with purpose and value.

The Career and Internship Center staff provides comprehensive services designed to assist students in exploring and attaining their professional career goals including self-assessment instruments, individual and group career counseling, a career and life planning course, career development programming, job and internship resources, and on-campus recruiting. Events include: Career Visions trips to network with professionals and alumni, career fair trips, interview fair trips, visits to employers, workshops, presentations, and employer presentations.

# Co-Curricular Programs

Albion College offers opportunities for students with interests in everything from computers to art—opportunities offered both inside and outside of the classroom.

**Anna Howard Shaw Women's Center**—See the Student Life section of this catalog for more information.

**Print and Electronic Media**—Students interested in writing, editing, layout and broadcasting may wish to take advantage of several campus opportunities. Students interested in journalism may work for The Pleiad, an online campus news source, or The Albionian, the yearbook. The campus literary journal is The Albion Review, which publishes poetry, prose and artwork by students, faculty and campus visitors; it is edited entirely by students. The campus radio station, WLBN, broadcasts on a closed-circuit system as well as the Internet and is operated by students who serve as D.J.s, news and sports announcers, special reporters/interviewers, and station directors. All students enrolled at Albion College may audition.

**Art Exhibits**—The Art and Art History Department sponsors a series of art exhibits in the galleries of the Bobbitt Visual Arts Center that feature the work of nationally-known artists, art department faculty, alumni and art students. In addition, the College maintains a collection of prints, ceramics, glass, paintings and other art objects that are regularly displayed.

**Music**—Albion's Music Department offers diverse opportunities for performance and private study. The Concert Choir, Briton Singers, Symphony Orchestra, Marching Band, Symphonic Band, Jazz Ensemble and chamber ensembles are open by audition to all students. Private lessons in voice, piano, organ, guitar and all orchestral and band instruments are available to all students. Off-campus study and internships offer outstanding opportunities in New York, Washington, D.C., Chicago and abroad for students pursuing professional careers in music and related fields.

**Theatre**—Four major plays and several studio productions are staged each year. These are produced by the Theatre Department and the Albion College Players. All Albion students are invited to become involved in theatre activities. Under certain circumstances it is possible for students to receive credit for their participation.

Internships with professional theatre groups and the broadcast media are possible in New York and Philadelphia, and Albion's other off-campus programs in the U.S. and abroad can provide new and different perspectives in the theatre.

# Academic Honors and Activities

Albion encourages students to expand their experience both inside and outside of the classroom. A wide range of extra-curricular and co-curricular activities provide recreational and educational opportunities for all students. These include honor societies, honorary organizations, departmental clubs, off-campus study, interdisciplinary courses, performing arts, and more. In addition, Albion provides a complete intramural and varsity athletic program which is described in the Student Life section of this catalog.

# Academic Honors

**Dean's Honor List**—Those full-time students whose grade point average is 3.5 or above at the completion of a semester are named to the Dean's List issued at the close of each semester. To qualify, students must take at least three units in graded courses and successfully complete four units. All course work must be completed on the Albion College campus.

**Graduation Recognition**—Three grades of recognition are conferred at graduation. For students graduating in 2006 and after, cum laude is granted to those who have a grade point average of 3.50 to 3.74; magna cum laude is granted to those who have a grade point average of 3.75 to 3.89; and summa cum laude is granted to those who have a grade point

average of 3.90 or above. Grade point averages are not rounded. A student must complete at least three semesters of study at Albion College to be considered for graduation recognition.

**Albion College Honors**—To graduate "with Albion College honors," a student must have a cumulative grade point average of at least 3.5, have completed all four Great Issues honors seminars, and have completed an acceptable honors thesis and submitted it to the Honors Committee by the required deadline.

**Thesis Honors**—Qualified students not graduating with Albion College honors may also present papers to be submitted for thesis honors. Normally, such students will have a cumulative grade point average of 3.0 or higher. A student whose thesis is accepted will graduate "with honors." Each thesis must be approved by a committee comprising at least three faculty members, and the committee as a whole must be approved by the director of the Brown Honors Program. Details on the types of theses that may qualify for honors appear in the Academic Regulations section of this catalog.

# Honor Societies

**Phi Beta Kappa** is the oldest of the national honorary societies, founded in 1776. The Beta chapter of Michigan was established at Albion in 1940. Members are usually seniors in the top 10 percent of their graduating class who meet the chapter's liberal studies and residency requirements.

**Sigma Xi**, The Scientific Research Society, was founded in 1866 as an honor society for scientists and engineers. The Albion chapter, started in 1959, includes faculty and students who are involved in scientific research. Students who have done research at Albion or in an approved off-campus program and who anticipate a career in science are eligible for nomination as associate members.

**Albion College** Fellows have attained a 3.7 average for three successive semesters on campus. They must also take at least three units in graded courses and successfully complete four units each semester. Participation in an approved off-campus program does not prevent students from qualifying at the end of the semester after they return.

**Mortar Board**, a national honorary, was established at Albion in 1941 to honor women who have been outstanding in scholarship, leadership and service. In 1976 the Albion chapter voted to make its membership coeducational.

**Omicron Delta Kappa**, national leadership honorary, was established at Albion in 1942 to honor juniors and seniors who have actively contributed to campus life and scholarship.

**Alpha Lambda Delta**, national freshman scholastic honorary, recognizes students who have received a 3.5 average at the end of their first semester and are in the top 20 percent of their class, based on at least three units of graded courses per semester. Alpha Lambda Delta was established at Albion in 1940.

# Departmental Honoraries and Clubs

Many academic departments of the College sponsor honoraries in recognition of high scholarship. Minimum requirements for membership in these honoraries usually include: a departmental grade average of 3.0; an all-College grade average of 2.5; a major or minor in the respective department; and sophomore standing, although second semester freshmen are eligible in very unusual cases. The departments and their respective organizations include:

Biology—Beta Beta Beta (national)
Chemistry—Fall Chemistry Club
Economics—Omicron Delta Epsilon (national)
English—Joseph J. Irwin Honorary Society
Geology—Sigma Gamma Epsilon (national)
History—Phi Alpha Theta (national)
Mathematics—Kappa Mu Epsilon (national)

Music—Pi Kappa Lambda (national)
Physics—Sigma Pi Sigma (national)
Political Science—Pi Sigma Alpha (national)
Psychology—Psi Chi (national)
Public Policy—Pi Sigma Sigma (national)
Sociology—Alpha Kappa Delta (national)

Many departments also have their own clubs designed to encourage interest and to supplement the work in the classroom.

Departmental awards are given on a broad range of criteria to students in the form of prizes, honors and other distinctions. Students are urged to familiarize themselves with the awards by contacting the respective departmental chair.

# Scholarships and Fellowships for International Study

The national scholarships and fellowships listed below assist students who wish to study and/or conduct research abroad. Because the selection process for these awards is highly competitive, students are strongly encouraged to consult with the campus advisers for these programs during the application process.

**Freeman-ASIA**—The primary goal of the Freeman-ASIA Program is to increase the number of U.S. undergraduates who study in East and Southeast Asia by providing students with the information and financial assistance they will need. Awardees are expected to share their experiences with their home campus to encourage study abroad by others and to spread understanding of Asia in their home communities. For more information, see http://www.iie.org.

**Fulbright Grants**—Congress created the Fulbright program in 1946 to foster mutual understanding among nations through educational and cultural exchanges. Each year, the Fulbright program enables U.S. students, artists and other professionals to study or conduct research in more than 100 nations. The program offers Fulbright full grants, Fulbright travel grants, foreign and private grants and teaching opportunities. Brochures, application forms and information are available from the Center for International Education or the Fulbright campus adviser, Dale Kennedy, director of the Prentiss M. Brown Honors Program. The campus application deadline is Oct. 1. For more information, see http://www.iie.org/.

**German Academic Exchange Service (DAAD)**—The German Academic Exchange Service (DAAD) is a publicly-funded independent organization of higher education institutions in Germany. Each year DAAD, its Regional Branch Offices, its Information Centers and DAAD professors around the globe provide information and financial support to over 67,000 highly-qualified students and faculty for international research and study. Located in New York, San Francisco and Toronto, DAAD North America advises students, faculty and current DAAD fellows in the U.S. and Canada. For more information, contact Perry Myers, Department of Modern Languages and Cultures, or see http://www.daad.org/.

**Benjamin A. Gilman International Scholarship Program**—The Benjamin A. Gilman International Scholarship Program reduces barriers to study abroad by providing assistance to those undergraduate students who have demonstrated financial need. This program offers a competition for awards for study abroad, for U.S. citizens who are receiving federal Pell Grant funding. Pell recipients planning to study abroad should also apply for a Gilman Scholarship. This congressionally funded program is offered through the Bureau of Educational and Cultural Affairs of the U.S. Department of State and is administered by the Institute of International Education. Selected by competition, recipients are awarded up to $5,000 to defray the costs associated with studying abroad. For more information, see http://www.iie.org/en/Programs/Gilman-Scholarship-Program.

**British Marshall Scholarships**—Established by an act of Parliament in 1953 to commemorate the ideals of the European Recovery Programme (the Marshall Plan), the British Marshall scholarships are intended to enable "intellectually distinguished young Americans to study in the United Kingdom and thereby to gain an understanding and appreciation of the British way of life." Applications must be submitted on prescribed forms available by mid-May

from the Office of International Education. The campus application deadline is Oct. 1. For more information, see http://www.marshallscholarship.org/.

**NSEP Scholarships**—Established by the National Security Education Act of 1991, NSEP scholarships aim to provide U.S. undergraduate students with the resources and encouragement they need to acquire expertise in languages, cultures and countries less commonly taught in the United States. NSEP scholarships can be applied for study in all countries except Western Europe, Canada, Australia and New Zealand. Applications can be obtained from the Office of International Education or the NSEP campus adviser. The campus application deadline is Dec. 1. For more information, see www.borenawards.org.

**Rhodes Scholarship**—The Rhodes scholarship provides for study at Oxford University and is one of the most competitive awards available. Applicants must demonstrate outstanding intellectual and academic achievement, but they must also be able to show integrity of character, interest in and respect for their fellow beings, the ability to lead and the energy to use their talents to the fullest. Forms and information are available from the Office of International Education. The campus application deadline is Oct. 1. For more information, see http://www.rhodesscholar.org.

**Rotary Ambassadorial Scholarships**—The primary purpose of this program is to further international understanding and friendly relations among people of different countries. Scholarship applications need to be made more than a year in advance of the planned study abroad program experience. Rotary awards provide for all expenses of most semester and year-long study-abroad programs. For more information, see http://www.rotary.org/en/StudentsAndYouth/EducationalPrograms/AmbassadorialScholarships/Pages/ridefault.aspx.

Information on other study-abroad scholarships may be obtained in the Center for International Education.

# Scholarships and Fellowships for Study in the United States

The scholarships and fellowships listed below are awarded nationally to undergraduate students who wish to continue their studies in the areas specified by the respective program. Because the selection process for these awards is highly competitive, students are strongly encouraged to consult with the campus advisers for these programs during the application process.

**Jack Kent Cooke Graduate Scholarship Program**—The Jack Kent Cooke Foundation provides scholarships to college seniors or recent college graduates of high need to enable them to attend graduate or professional schools. Approximately 65 of these scholarships are awarded annually. In order to apply, you must be nominated by our campus representative, the associate provost. For more information, see http://www.jkcf.org/scholarships

**Barry M. Goldwater Scholarship**—The Barry M. Goldwater Scholarship and Excellence in Education Program "was established by Congress in 1986 to honor Senator Barry M. Goldwater, who served his country for 56 years as a soldier and statesman." The purpose of the foundation is to develop highly qualified scientists, mathematicians and engineers by awarding scholarships to college students who intend to pursue careers in these fields. For more information, contact the Goldwater campus representative, Vanessa McCaffrey, Department of Chemistry, or see http://www.act.org/goldwater.

**National Science Foundation Graduate Research Fellowships**—The program recognizes and supports graduate students pursuing research-based master's and doctoral degrees in science, technology, engineering and mathematics disciplines. "NSF Fellows are expected to become knowledge experts who can contribute significantly to research, teaching and innovations in science and engineering." For more information, go to: http://www.nsfgradfellows.org/.

**Thomas R. Pickering Foreign Affairs Fellowship Program**—Outstanding students who are interested in pursuing a foreign service career with the U.S. Department of State may apply for a Pickering fellowship during their sophomore year. The fellowship award includes tuition, room, board and mandatory fees during the junior and senior years of college and during the first year of graduate study with reimbursement for books and round trip travel. The fellow must

commit to pursuing a graduate degree in international studies at one of the graduate schools identified by the Woodrow Wilson National Fellowship Foundation. Fellows meet annually in Washington, D.C., for a program orientation. Only U.S. citizens will be considered for the Pickering fellowships. Women, members of minority groups historically underrepresented in the Foreign Service, and students with financial need are encouraged to apply. For more information, see http://www.woodrow.org/fellowships/index.php.

**Harry S. Truman Scholarship**—These awards go to college juniors with "exceptional leadership potential who are committed to careers in government, the nonprofit or advocacy sectors, education or elsewhere in the public service. . . ." Approximately 80 awards are given annually for support in graduate school. For more information, go to http://www.truman.gov.

**Morris K. Udall Undergraduate Scholarship**—These highly competitive scholarships are awarded to college sophomores and juniors who have demonstrated commitment to careers related to the environment or who are Native American or Alaska Native and have demonstrated commitment to careers related to tribal public policy or health care. Interested students should prepare to apply at least a year in advance of the application deadline. Forms and information are available from the Udall campus representative, Timothy Lincoln, Department of Geological Sciences. For more information, see http://www.udall.gov/OurPrograms/MKUScholarship/MKUScholarship.aspx.

# Academic Regulations

# Graduation Requirements

A student graduates from Albion College after meeting a series of requirements including course work, satisfactory grade point average, a major, residency and others as outlined under specific degree requirements stated below. Students generally graduate after eight semesters.

# Bachelor of Arts Degree (B.A.)

The degree of bachelor of arts (B.A.) is conferred upon students who have met all of the following requirements for graduation:

**Minimum Units —** Students must complete a minimum of 32 units (128 semester hours) of course work to graduate. An Albion unit is equivalent to four semester hours. Included in the total are the core requirement described earlier, courses leading to the major(s) and minor(s), and elective courses which make up one-half to one-third of each student's total courses. There are limits on the number of wellness activity courses, music ensembles and internships that may count toward graduation. Normally students complete degree requirements within eight semesters. If students have not completed graduation requirements within eight graded semesters, they must petition the Committee on Academic Status and Petitions for permission to continue enrollment for each additional semester needed to complete requirements.

**Grade Point Average —** To qualify for the bachelor of arts degree, a student must have a 2.0 grade point average in all course work. A minimum 2.0 grade point average in one major field is also required for graduation. Students should note that to earn the designation of a second major, a 2.0 grade point average also must be achieved in that major. A department also may require additional demonstration of competence (minimum course grade requirements, comprehensive examination, senior recital or the like) to complete a major. Graduating students (2006 and after) earning a 3.5 cumulative grade point average or higher qualify for graduation recognition as described under the Academic Honors and Activities section.

**Core Requirement —** Graduating students must have completed the core requirement.

**Writing Proficiency Requirement —** Students must pass the Writing Proficiency Requirement to graduate.

**Majors and Minors —** Students must declare at least one major but no more than two majors prior to graduation. Although students may declare a major as early as the freshman year, this is generally done during the sophomore year. Students may fulfill the major requirement in one of three ways: departmental major, interdepartmental major and individually designed major. The maximum number of units required for a departmental major is 10 units in that department and an additional four units in other departments. No more than 16 units in any one department may be counted toward graduation. (A language major in the Foreign Languages Department means that no more than 10 units are required in the specific language declared as the major.) Further information on interdepartmental and departmental majors may be found in the Programs of Study section of this catalog, while the individually designed major is described in the Academics at Albion section. Students also have the option to declare a minor. Further information appears in the Academic Programs section and in the Programs of Study section.

**Music Ensembles and Dance —** A maximum of two units of credit for participation in music ensembles (instrumental and vocal) or dance studio courses may be applied toward completing the 32 units required for graduation.

**Wellness** — A maximum of four activity courses (100 level, 1/4 unit) in wellness may be used toward completing the 32 units required for graduation.

**Residence Requirement —** To be a candidate for an Albion College degree, a student must complete eight of the last 12 units at Albion College. Residence is defined as academic work completed on campus, in combined course programs, approved internships, or through approved off-campus programs.

**Application for Degree** — Graduating students must file an Application for Degree in the Registrar's Office the year prior to graduation.

**Participation in Commencement Exercises —** Students who have attained at least 25 units may participate in commencement exercises. Students may only participate once.

# Bachelor of Fine Arts Degree (B.F.A.)

Bachelor of fine arts students must complete a minimum of 34 units (136 semester hours) of course work to graduate. To qualify for the bachelor of fine arts degree, a student must have a 2.0 grade point average in all course work. Included in this total are the core requirement and at least 16 but not more than 21 units in visual arts. In addition, B.F.A. candidates must fulfill the writing proficiency requirement and the requirements on grade point average, residence and application for degree described in the preceding section on the bachelor of arts degree.

Students who are within three units of the minimum graduation requirement for the B.F.A. degree may petition for permission to participate in commencement exercises.

For more specific requirements, refer to the Department of Art and Art History section of the catalog.

# General Academic Regulations

In addition to the aforementioned graduation requirements, Albion College expects each student to meet the following academic regulations:

# Grading System

Students are graded according to the following designations:

| Grade | Quality Points | Grade | Quality Points |
|---|---|---|---|

| | | | |
|---|---|---|---|
| 4.0 | 1.00 | 1.7 | 1.70 |
| 3.7 | 3.70 | 1.3 | 1.30 |
| 3.3 | 3.30 | 1.0 | 1.00 |
| 3.0 | 3.00 | 0.0 | 0.00 |
| 2.7 | 2.70 | CR/NC | CR/NC |
| 2.3 | 2.30 | I | 0.0 (Incomplete) |
| 2.0 | 2.00 | | |

**4 —** represents work outstanding in quality. The student not only shows unusual mastery of the required work for the course, but also has independently sought out and used additional related materials, demonstrating the ability to discover new data, to develop new insights and to bring them to bear on the work at hand.

**3 —** represents work which is higher in quality than that of a 2.0, or more than satisfactory. The student has shown the ability and the initiative to fulfill more than the basic requirements of the course.

**2 —** represents work which fulfills all of the basic requirements for the course. It means that the student has a grasp of the material and techniques or skills sufficient to proceed with more advanced courses in the area.

**1 —** represents work seriously attempted but which is below the 2.0 level in quantity and quality. The student is advised not to continue advanced work in the field.

**0 —** represents work unsatisfactory in either quantity or quality. It results in the student's not being able to continue with further work in the field and results in no credit, although it is recorded on the permanent record.

**Note:** intermediate grades of 3.7, 3.3, 2.7, 2.3, 1.7 and 1.3 may be awarded.

**CR/NC —** credit/no-credit. A credit or no-credit grade is given in a course selected for unit credit without quality points. CR is equivalent to a grade of 2.0 or better. The purpose of CR/NC is: (1) to allow students to explore new areas of study outside their majors at no risk to their grade point averages; (2) to provide a method for evaluating academic experience different from usual course work, e.g., internships. Students are limited to one unit of CR/NC per semester except for some internships and off-campus programs, and to no more than eight units in the total of 32 units required for graduation. Students should note that the College is unable to predict how graduate schools and prospective employers will evaluate CR/NC. The CR/NC grading option may be elected up to the last day of classes each semester. See the academic calendar for exact dates.

**I –** incomplete. Incomplete grades are given only because of illness or other unavoidable circumstances as defined by the Committee on Academic Status and Petitions. In order to
receive an Incomplete, a student must have finished at least half of the total graded work required by the class with a passing grade at the time they take the incomplete. They must also
create a completion plan to finish the incomplete work in the shortest amount of time and have the plan approved by the faculty member teaching the course. A grade of incomplete must be removed by the Monday of the ninth week of the semester following the one in which the incomplete was given. Summer is not included as a semester. Incomplete grades given in the summer must be completed by the Monday of the ninth week in the following semester. At the end of the specified time period, the faculty member will assign a grade based on the amount of work satisfactorily completed. The grade of "I" carries no quality points.

Students with two or more outstanding Incompletes may register for no more than three courses in the following semester. Should a student reduce the total number of Incompletes to one or
zero before the end of the add/drop period, that student would be allowed to register for a full course load of up to 4.5 units.

**P –** work in progress. This grade is awarded only for directed study and thesis work that requires an extension of time for completion. Students must re-register for the course in their next semester of attendance. Failure to complete the work during this time will result in a grade based on the amount of work satisfactorily completed. The grade of "P" carries no quality points. This grade may also be awarded to students who are enrolled in courses that extend past the end of the semester. Failure to complete the work during the scheduled course time will result in a grade based on the amount of work satisfactorily completed. The grade of "P" carries no quality points.

**AU –** audit. Students are expected to attend classes, complete all assignments, etc. Students receive a numeric grade but no credit.

**Grade Reports —** Grades are available via the Albion College Information System (ACIS) at mid-semester to first-year students, all students on academic probation and other students performing below a 2.0 in a particular course. Final grades are available via ACIS to all students at the end of each semester. Final grades become a part of the official academic record of each student.

**Withdrawal from Courses —** A student may withdraw from a course up to and including the Monday of the eleventh week of the semester by turning in to the Registrar's Office a request form bearing the signatures of the student's instructor and adviser. Performance in the course will be recorded on the permanent record as a grade of W. The grade of W does not carry grade point value. This decision may not be reversed if the student later wants to be given a grade.

**Course Grade Appeal —** Students who wish to appeal the final grade received in a particular course must first consult with the professor of the course in question. Following consultation with the professor, if the student concerns have not been satisfactorily addressed, the student may then consult with the department chair and then finally with the provost.

A final appeal can be made to the Faculty Steering Committee, which will review the steps taken and recommend a solution. If the College is not in session, the chair of the Steering Committee will convene a representative group of faculty to review the grade change appeal.

If a student doubts the wisdom or propriety of personally appealing a final grade, then the student is urged to discuss the matter with his/her faculty adviser, the department chair or a staff member in the Registrar's Office. As a result of these discussions, an intermediary-either the student's faculty adviser or another full-time faculty or staff member selected by the student-should evaluate the course grade appeal before acting for the student in pursuing a change of grade.

All final grade changes must be approved by the provost with the advice and consent of the registrar.

# Student Classification

Students are classified as follows:

| | |
|---|---|
| Freshman | 0.0 - 5.99 units |
| Sophomore | 6.00 - 13.99 units |
| Junior | 14.00 - 21.49 units |
| Senior | 21.50 or more units |

# Course Schedules

**Repeat Courses —** A student taking a course for the first time who receives a final grade of 0.0, 1.0, 1.3, or 1.7 may repeat said course without the permission of the student's advisor or the Committee on Academic Status and Petitions. A student wishing to repeat a course more than once may do so only with the permission of the student's advisor and the Committee on Academic Status and Petitions. A student may not repeat any single course more than twice. Further, a student may not repeat more than four total units of course work. Although both original and all repeated grades appear on the permanent academic record, only the most recent grade for the course is included in calculating the grade point average and in meeting graduation requirements.

A student may not repeat a course in which the final grade was 2.0 or higher. This policy cannot be petitioned.

Repeat course work to improve grades must be taken at Albion; grades from another institution may not be transferred for this purpose.

**Course Load —** The standard student course load is four units per semester. The minimum student load is three units. Approval from the Committee on Academic Status and Petitions must be obtained if a student wishes to carry less than the minimum course load. A student is eligible for a course load of 4.75 or five units with a cumulative grade point average of 3.3 or greater. A student who wishes to carry an overload and does not meet this eligibility requirement must petition to carry an overload.

Additional tuition and fees apply for a course load above 4.5 units. If, during the first week of classes, a student drops from an overload status, a refund will be made. Following this period, if a student withdraws from a course overload, the course will remain on the student's bill as a billable unit. No refund will be made of any portion of tuition or fees related to the withdrawn course.

**Course Schedule Changes (Dropping/Adding a Course) —** All schedule changes or dropping or adding of courses must be made and confirmed either via the Albion College Information System (ACIS) or in the Registrar's Office. Changes made from the first day of classes through the first week of classes will be permitted upon application to the Registrar's Office. Normally, no changes may be made after the first week of classes. In exceptional cases it may be to the best interest of the student to adjust his/her program after the first week. Such changes will be recognized only when they have been approved in advance by the Committee on Academic Status and Petitions. It is the responsibility of the student to petition through the Registrar's Office for any change whatsoever to his/her program. The student is expected to continue with the original class schedule until changes are formally approved.

# Class Attendance

Instructors may drop from their courses any student who is registered for the course and not present during the first scheduled meeting. **However, students should not assume that they have been dropped from a class if they are not present at the first scheduled meeting.** If a student cannot be present at the first class session, he/she must make special arrangements with the instructor prior to the first class meeting in order to maintain a place in the course. Each semester, all students must arrive on campus, complete the final enrollment process, and attend classes no later than the last day to drop and add a course as listed on the College's academic calendar. If circumstances prevent a student from arriving on campus for the first day of classes each semester, the student must notify the Student Development Office. A student should always process a drop/add or schedule change form in the Registrar's Office if he/she wishes to drop a course. Furthermore, regular attendance in all classes is expected throughout the semester. Every absence from class is inevitably a loss--usually one which can never be made up. At their discretion, individual instructors may include attendance and class participation as one of the criteria for evaluation of the final grade. Students who are absent from class assume full responsibility for the loss.

**Examinations —** Students are expected to be present for written examinations at the close of each semester. Students who are absent from a final examination will be allowed to take the omitted examination only if such absence is caused by illness or other unavoidable circumstances approved by the Committee on Academic Status and Petitions.

# Academic Honesty

Albion College expects its students to take responsibility for their academic endeavors and to accept the consequences. No student should act in a manner that would harm the academic atmosphere of the institution or diminish the experience of any member of the academic community. Strict standards of academic honesty apply to all academic work at Albion College. Students are expected to do their own work. Cheating on examinations or plagiarism is a clear violation of the College's standards and policies. In preparing essays, reports and other projects, any use of the words or ideas of someone else as though they were one's own constitutes plagiarism. Any student found to have violated the College's policy on academic honesty, including cheating and plagiarism, will be subject to penalties in the course and possible disciplinary sanctions, up to and including expulsion from the College. A Judicial Board finding of academic dishonesty may be noted on the student's transcript. A complete explanation of College policy and procedures concerning academic honesty may be obtained from the Student Development Office or viewed online in the Student Handbook.

# Special Studies

**Seminars —** A seminar is usually a small class dealing with a selected topic for each semester. Requirements for enrollment in seminar courses are determined by the individual department.

**Directed Studies —** A directed study enables a student to do in-depth research on a topic or to carry out a creative project at a level beyond that offered in course work. Directed studies are open only to juniors and seniors and are taken in a department under the numbers 411 or 412, for either one-half or one unit.

To do a directed study, a student must prepare a proposal in writing, which must be endorsed by the proposed faculty supervisor and reviewed by the department chair. The proposal must be filed with the Registrar's Office for credit to be received.

Students doing a directed study must meet with their faculty supervisor weekly for one hour for a directed study. In addition to meeting with their faculty supervisor, students are expected to work a minimum of five hours a week for a one-half unit directed study and 10 hours a week for a one-unit directed study. Faculty and departments are not obligated to offer directed studies.

Directed studies are ordinarily graded credit/no credit. However, under special circumstances, students may request a numerical grade for their directed study with the approval of their faculty supervisor and the department chair. Students who choose the numerical grade option must submit complete grading criteria developed by the faculty supervisor to the Registrar's Office and should inquire with the department chair about any departmental policies regarding numerical grading of directed studies. Students must request the numerical grade option no later than the end of the second week of classes.

As with other courses, regular feedback from the faculty supervisor throughout the semester on student work is necessary for student learning and the development and completion of an acceptable directed study.

**Tutorials —** In a tutorial, a student works individually with a faculty member on a course not available to the student in the current semester, but at a comparable level. To do a tutorial, a student must prepare a proposal in writing, which must be endorsed by the proposed faculty supervisor and reviewed by the department chair. The proposal must be filed with the Registrar's Office for credit to be received.

Tutorials are not intended to replace regularly scheduled courses except when there is no other way program requirements can be met. Faculty and/or departments are not obligated to offer tutorials. A regularly scheduled course taken as a tutorial will show the notation ``T'' after the course number on a student's transcript.

**Internships and Practica —** Internship experiences offer opportunity to participate in, observe and analyze the workings of a firm, agency, or organization. These may be undertaken in a practicum class, or as individual internships,

offered by a department under the numbers 391-394. Credit for internship experience varies with the placement from one-half to two units. Normally a student will not undertake an internship until the junior year.

Internships and practica are offered on a credit/no credit basis with not more than four units of credit applying toward the 32 units required for the B.A. or the 34 units required for the B.F.A. degree. This includes internship and practicum experience completed in off-campus programs and at other accredited academic institutions. Unless the internship experience is for an approved off-campus program, a maximum of two units of internship credit may be earned in one semester. All students who apply for an internship or practicum are expected to have a cumulative grade point average of 2.7.

For academic credit, a student must complete the following hours at the internship site during the regular academic period.

One-half unit: 75-149 hours
One unit: 150-300 hours
One and one-half or two units: 301+ hours

For one and one-half or two units of credit, a student is expected to demonstrate a greater breadth and depth of understanding than is possible within the context of a one-half or one unit internship. No more than four units of credit received in connection with internships or practica may apply toward graduation.

# Honors

**Graduation Recognition** — Three grades of recognition are conferred upon graduation from Albion College. For students graduating in 2006 and after, cum laude is granted to those who have a cumulative grade point average of 3.50; magna cum laude is granted to those who have a cumulative grade point average of 3.75; and summa cum laude is granted to those who have a cumulative grade point average of 3.90 or above. Grade point averages are not rounded. A student must complete at least 12 units and three semesters of study at Albion College to be considered for graduation recognition.

**Albion College Honors —** To graduate "with Albion College honors," a student must have a cumulative grade point average of at least 3.5, have completed all four Great Issues honors seminars, and have completed an acceptable honors thesis and submitted it to the Honors Committee by the required deadline.

**Thesis Honors —** Qualified students not graduating with Albion College honors may also present papers to be submitted for thesis honors. Normally, such students will have a cumulative grade point average of 3.0 or higher. A student whose thesis is accepted will graduate "with honors." Each thesis must be approved by a committee comprising at least three faculty members, and the committee as a whole must be approved by the director of the Brown Honors Program. Qualified students can complete the following kinds of theses "with honors" as specified below:

For a "thesis in —— major(s)," the thesis adviser and at least one other thesis committee member must be from the department offering the major. For majors that are not housed in departments (e.g., business and organizations, environmental science, environmental studies, public policy, sustainability studies), the thesis adviser can be from any associated department. For majors that are housed in departments with only one faculty member (e.g., ethnic studies, international studies, women's and gender studies), the other thesis committee members can be from any department.

For a "thesis in —— minor(s) or concentration(s)," the thesis adviser and at least one other committee member must be from the department offering the minor or concentration. The other thesis committee members can be from any department. For minors or concentrations that are not housed in departments (e.g., business and organizations, environmental science, environmental studies, public policy, sustainability studies), the thesis adviser can be from any associated department. For minors or concentrations that are housed in departments with only one faculty member (e.g., ethnic studies, international studies, women's and gender studies), the other thesis committee members can be from any department.

For a thesis to qualify as an "interdisciplinary thesis," the thesis adviser and other committee members can be from any department, major, minor, or concentration associated with the topic of the thesis (with at least two departments, majors, minors or concentrations represented on the committee).

# Credit Hour Definition

Albion College defines a credit hour (.25 Albion College unit) as one hour of classroom or direct faculty instruction and a minimum of two hours of out of class student work each week for approximately fifteen weeks for one semester or the equivalent amount of work over a different amount of time. A credit hour can also be an equivalent amount of work as required above for other academic activities as established by the College including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours. Each Albion College 1 unit course includes a minimum of 60 clock hours of instruction as well as 120 hours of out of class student work.

# Length and Scheduling of Courses

All 1 unit courses meet for a minimum of 195 minutes per week. A 1 unit course normally meets two or three days a week. Occasionally courses will meet four days a week. Rarely, courses will vary from these schedules and must have approval from the Registrar and/or Provost. All .5 unit courses meet for a minimum of 100 minutes per week. .5 unit courses normally meet one or two days a week. All .25 unit courses meet for a minimum of 50 minutes per week. .25 unit courses normally meet one or two days a week.

# Transcripts

Official transcripts are maintained by the Registrar's Office on all academic work attempted at Albion College. Students may request in writing individual copies of their record or request that copies of their record be mailed to other parties. All requests must bear the signature of the student. Transcripts will not be released for students who have past due accounts with the College.

# Transfer Credit

Before enrolling at other accredited institutions for academic work to be applied toward the graduation requirements at Albion, students attending Albion College must secure written approval for each course from the registrar, using the Transfer Credit Approval Form. (See also the residence requirements for graduation.) To receive transfer credit, a student must submit an official sealed transcript of the completed course(s) to Albion College. The Registrar's Office will evaluate each course on the following basis: its liberal arts nature, comparability to courses taught at Albion College, and the grade earned. No courses in which the student earned below a 2.0 (on a 4.0 scale) will be considered for transfer credit. One Albion unit equals four semester hours or six quarter hours. Therefore, three semester hours equal three-quarters of a unit, three quarter hours equal one-half of a unit. Any transfer work which the student requests to be considered for his/her major must be approved in writing by the department chair.

Accepted transfer credit is recorded on the student's official Albion College transcript indicating where the work was completed, when the work was completed and the number of Albion units earned. No grades are recorded, and transfer credit is not reflected in a student's grade point average.

# Online Course Sharing

Students are allowed to take a limited number of courses through the Council of Independent Colleges Online Course Sharing Consortium (CIC-OCSC). This option is available to help students in specific circumstances when they cannot take a course on campus or during the online summer term or when they need additional courses to get on track for their major/minor. Both the grade and the full credit hour equivalency for a CIC-OCSC course will count towards a student's progress toward graduation. Department Chairs approve CIC-OCSC courses acceptable for their degree programs. Only approved CIC-OCSC courses would be available for Albion students to view and register for via the CIC-OCSC platform.

- Students may take no more than 1 CIC-OCSC course in each fall or spring semester; no more than 2 CIC-OCSC courses per summer term.
- No more than 4 total CIC-OCSC courses may be applied toward completion of degree, with no more than 2 CIC-OCSC courses applied to a single major/minor/concentration (as approved by the department).
- The student must work with their academic advisor to identify appropriate CIC-OCSC course(s), and the advisor and department chair must approve the CIC-OCSC course(s) prior to submission of requests to the Registrar's Office.
- Once the student begins a CIC-OCSC course, they will need the approval of their academic advisor before they can drop or withdraw from the course.
- Only the Registrar's Office will be authorized to drop or withdraw the student from the course.
- Students must pay the current summer tuition rate to take CIC-OCSC courses during the summer session.
- Student must pay the current summer tuition rate to take a CIC_OCSC course during the fall and spring semester unless the Provost and REgistrar determine, in consultation with the relevant department chair, that the course is required for their degree program and no suitable Albion course is available as an alternative. In those cases, students may take a CIC-OCSC course during the fall or spring semester as part of their ordinary course load without additional payment.

# Catalog of Entry

Though departmental and graduation requirements of the College may change while a student is enrolled, it is expected that each student will meet the requirements outlined in the catalog that is in effect at the time he or she entered Albion. The "catalog of entry" philosophy is considered applicable for students who leave the College and whose interrupted course of study is not longer than five years.

# Academic Status

The academic record of each student is reviewed at the close of the fall and spring semesters by the Committee on Academic Status and Petitions. Specific attention is given to the student's progress both in completing units of credit and in maintaining the minimum 2.0 cumulative grade point average which are required for graduation from the College. Students who fail to demonstrate satisfactory progress toward graduation may be suspended from the College. The Committee determines academic status and is guided in its decisions by the following:

**Academic Alert**

- Students who have a cumulative grade point below a 2.30 but above a 2.0 are placed on the status of Alert. While the student is still technically making satisfactory academic progress, their cumulative grade point average is low enough that there are reasons for concern.
- A letter will be sent to the student and their academic advisor from the Learning Support Center (LSC) concerning the student's academic progress and with invitations to participate in LSC support programs.
- Students will be requested to work on an academic success plan with their academic advisor.

**Academic Warning**

- Students with a semester grade point average below 2.0 will be placed on a status of Warning
- A letter will be sent to the student and their academic advisor from the Provost's Office concerning the student's academic progress and with specific recommendations concerning Learning Support Center (LSC) support programs.
- Students are required to review their class schedule for the next semester with their academic advisor and make any course adjustments based on previous academic performance and course selection guidance provided by the LSC.
- Students will be offered the opportunity to participate in LSC support services in the areas of mindfulness, self-exploration and academic coaching.

**Academic Probation**

The Academic Status and petitions Committee will determine the level of support needed for each student placed on probation. Typically, the Committee will follow the following procedures:

Students with two or more semesters below 2.0 GPA,

- A letter will be sent to the student and their academic advisor from the Provost's office concerning the student's academic progress and with specific recommendations including:
- Students will be required to enroll in IDY 102 (.25 unit) from staff and/or faculty working with the Learning Support Center (LSC). Additional LSC interventions may be required based on the individual student circumstances.
    - Academic Coaching: upper-class student mentor/tutor
    - Study Table Program
    - Individual Weekly Appointments with LSC staff
    - Weekly Meetings with Academic Advisor
    - Evaluation of Learning Styles
- Student class registration for the following semester must be reviewed by the Committee on Academic Status and Petitions and the student's academic advisor.
- Students may be subject to academic suspension if they fail to meet the requirements of academic probation.

**Terminal Academic Probation:**

Students with two or more semesters on a status of probation,

- A letter will be sent to the student and their academic advisor from the Provost's Office concerning the student's academic progress and with specific recommendations including:
- Students will be required to take IDY 100 (.5 unit), Academic Success.
- Student class registration for the following semester must be reviewed by the Committee on Academic Status and Petitions and the student's academic advisor.
- Students may be subject to academic suspension if they fail to meet the requirements of academic probation.

**Academic Suspension —** Students who fail to demonstrate satisfactory academic progress toward graduation may be suspended from the College.

At the end of each semester, satisfactory academic progress is determined by the Committee on Academic Status and Petitions according to the guidelines below:

1.25 with a minimum of 3 units completed at the end of the first semester of attendance;

1.50 with a minimum of 6 units completed at the end of the second semester of attendance;

1.75 with a minimum of 9 units completed at the end of the third semester of attendance;

2.00 with a minimum of 12 units completed at the end of the fourth semester of attendance;

2.00 with a minimum of 15 units completed at the end of the fifth semester of attendance;

2.00 with a minimum of 18 units completed at the end of the sixth semester of attendance;

2.00 with a minimum of 22 units completed at the end of the seventh semester of attendance.

2.00 with a minimum of 25 units completed at the end of the eighth semester of attendance.

2.00 with a minimum of 29 units completed at the end of the ninth semester of attendance.

2.00 with a minimum of 32 units completed at the end of the tenth semester of attendance.

A student is also subject to academic suspension if he or she fails to obtain a minimum semester grade point average of 2.0 for work in three consecutive semesters, or meet the requirements of academic probation. In cases in which a student has not made sufficient progress toward a degree, that student may be suspended without having been on academic probation in the preceding semester.

**Conditions for Return from Academic Suspension**

Students wanting to return to Albion College following an academic suspension must:

- Complete at least 3 units (12 semester credit hours) of college level course work from an accredited college or university with a minimum grade point average of 2.0 in each course. An official transcript of the courses must be submitted to the Provost's Office.
- Complete an application for readmission and submit it to the Provost's and Student Development Offices.
- Submit a letter of support for readmission from a faculty or academic staff member from the institution noted above along with your application for readmission.

**Academic Expulsion**

A student is subject to academic expulsion if the student has previously been academically suspended is re-admitted to the College and is academically suspended a second time. Students who have been academically expelled from Albion College may not apply for re-admittance.

# Other Policies on Academic Status

**Insufficient Progress toward Degree and Registration Holds —** The College reserves the right to deny access to classes for students who make insufficient progress toward a degree. Students who are declared in a major, minor or concentration but make insufficient progress may be removed from that major, minor and/or concentration. Students who fail to declare a major by the end of their sophomore year will not be permitted to register. Normally, students complete degree requirements within eight semesters. If students have not completed graduation requirements within eight graded semesters, they must petition the Committee on Academic Status and Petitions for permission to continue enrollment for each additional semester needed to complete requirements.

**Veteran's Requirements —** A veteran or eligible person receiving VA benefits cannot be certified by Albion College as a student making satisfactory progress towards a degree if this student is on academic probation longer than two

semesters. VA benefits will cease after two semesters of probation. The Veteran's Administration will be notified of any veteran who fails a course or who is not making satisfactory progress. In order to be recertified for veteran's benefits the student must remove all quality point deficiencies and earn a cumulative grade point average of 2.0.

**Leave of Absence —** Leave of absence is a privilege that may be requested for those who desire to interrupt, but not to discontinue permanently, their enrollment at Albion for one or two semesters. A leave of absence plan must be created by working with the Cutler Center for Student Success prior to the semester in which the student is requesting the leave of absence. A student who is granted a leave of absence may, when appropriate, continue to participate in enrollment procedures of regularly enrolled students for such considerations as course registration, room lottery, and applications for financial assistance. The student is expected to return to Albion following leave.

**Voluntary Withdrawal from College —** Students who wish to withdraw from the College during the semester (i.e., withdrawing *after* enrollment has been completed at the beginning of a semester and before the completion of final exams) should initiate the withdrawal process by contacting the Cutler Center for Student Success or the Student Development Office and submitting a Mid-Semester Withdrawal Notification Form.

**Readmission —** Graduates or former students may apply for readmission to the College through the Student Development Office. Applications for readmission are to be submitted at least one month prior to the beginning of the semester in which the student wishes to return. Students are charged a readmission fee of $75.

**Non-degree Status (Special Student Status) —** Applies to students enrolled for special programs designed to fill particular needs but not usually leading toward graduation. This status normally applies only to students at the freshman or sophomore level. Re-enrollment as a non-degree student is dependent upon the maintenance of a minimum grade of 2.0 in each course in which the student is enrolled. A non-degree student must submit appropriate credentials to the Admission Office one month in advance of registration. Non-degree students who wish to become candidates for the bachelor of arts degree must formally apply for admission to the College.

# Programs of Study

# Departmental Information

All of the departmental information contained in this section of the Academic Catalog was accurate as of August 29, 2022. Any departmental changes made after that date will not be reflected here. Information on changes may be obtained from the respective department or from the Registrar's Office in the Ferguson Student, Technology, and Administrative Services Building.

# Anthropology and Sociology

# Faculty

**Bradley A. Chase**, chair and associate professor.
B.A., Northwestern University; M.S., Ph.D., University of Wisconsin-Madison. Appointed 2008.

**Allison D. Harnish**, associate professor.
B.A., Western Kentucky University; Ph.D., University of Kentucky. Appointed 2013.

**Allison Jendry James**, visiting assistant professor.
B.A., University of Michigan-Flint; M.A., Eastern Michigan University. Appointed 2021.

**Scott A. Melzer**, professor.
B.A., University of Florida; M.A., Ph.D., University of California, Riverside. Appointed 2004.

**Matthew Schoene**, assistant professor.
B.A., Villanova University; M.A., Ph.D., The Ohio State University. Appointed 2016.

**Lynn M. Verduzco-Baker**, associate professor.
B.A., 1991, California State University, Fresno; M.A., 2009, Ph.D., 2011, University of Michigan. Appointed 2011.

**Meghan Webb**, assistant professor.
B.A., Centre College; M.A., California State University, Sacramento;  Ph.D., University of Kansas. Appointed 2018.

# Our Mission

Anthropology and sociology are distinct disciplines united by a common interest in understanding humans and their communities. To this end, both programs focus on teaching majors, minors, and non-majors with the empirical methods, interpretive theories, and substantive findings of their respective disciplines that will allow them to understand the human condition across the full range of human global diversity—past and present. We pay particular attention to increasing students' knowledge of how race, ethnicity, gender, sexuality, and social class are socially constructed in particular environmental contexts through time. We teach students to think analytically, critically, and creatively and to express themselves effectively. We emphasize the importance of research skills that foster students' intellectual abilities to master the applications of anthropology and sociology to prepare them for graduate school, for employment, and to bring about positive change in the world.

# Career Opportunities

Knowledge and skills gained through the study of anthropology and sociology are valuable in everyday life and in a wide variety of careers. Training in anthropology and sociology may be especially valuable for students interested in pursuing careers in international business, public administration, market research, law enforcement, job counseling, human services, public health, international diplomacy, medical social work, foreign assistance, hospital administration, service agency planning, journalism and management.

A bachelor's degree in anthropology/sociology prepares students for graduate study and employment in fields such as law, urban planning, labor relations, personnel management, hospital administration, corrections, school administration, public health and museum management, as well as research and teaching in the fields of anthropology and sociology. Recent graduates from the department have become biostatisticians, urban planners, lawyers, biological anthropologists, congressional staff workers, physicians, nurses, news reporters and church field staff workers.

# Student Learning Outcomes

## Anthropology

### Major

1. Students will be able to evaluate empirical research methods and interpretations in anthropology.
2. Students will be able to assess anthropological theories.

3. Students will be able to analyze global cultural diversity, past and present.
4. Students will be able to interpret global inequities, past and present.
5. Students will be able to develop independent scholarly research.

### Minor

1. Students will be able to describe empirical research methods and interpretations in anthropology.
2. Students will be able to apply anthropological theories.
3. Students will be able to identify global cultural diversity, past and present.
4. Students will be able to recognize global inequities, past and present.

## Sociology

### Major

1. Students will be able to evaluate qualitative and quantitative research methods and interpretations in sociology.
2. Students will be able to assess sociological theories.
3. Students will be able to analyze the social construction of intersecting identities such as race, ethnicity, class, gender, and sexuality.
4. Students will be able to interpret structural inequities in social and historical context.
5. Students will be able to develop independent scholarly research.

### Minor

1. Students will be able to describe qualitative and quantitative research methods and interpretations in sociology.
2. Students will be able to apply sociological theories.
3. Students will be able to identify the social construction of intersecting identities such as race, ethnicity, class, gender, and sexuality.
4. Students will be able to recognize structural inequities in social and historical context.

## Anthropology-Sociology

### Major

1. Students will be able to evaluate empirical research methods and interpretations in anthropology and sociology.

2. Students will be able to assess anthropological and/or sociological theories.
3. Students will be able to analyze global cultural diversity, past and present.
4. Students will be able to analyze the social construction of intersecting identities such as race, ethnicity, class, gender, and sexuality.
5. Students will be able to interpret structural inequities, past and present, in social and historical context.
6. Students will be able to develop independent scholarly research.

## Minor

1. Students will be able to describe empirical research methods and interpretations in anthropology and sociology.
2. Students will be able to apply anthropological or sociological theories.
3. Students will be able to identify global cultural diversity, past and present.
4. Students will be able to identify the social construction of intersecting identities such as race, ethnicity, class, gender, and sexuality.
5. Students will be able to recognize structural inequities, past and present in social and historical context.

# Anthropology and Sociology Combined, B.A.

## Requirements for Major in Anthropology and Sociology

Although anthropology and sociology are separate and distinct disciplines, they also have many things in common: theories and methodologies, a focus on cultural similarities and differences and a commitment to international and/or global studies. Nearly all students choosing one of the two tracks outlined above will take courses in both anthropology and sociology, but some students may find that their academic needs are best met by a major that explicitly combines both fields of study.

## Nine Units Including:

### SOC 101: An Introduction to Sociology

(1 Unit)
Provides students with the analytic tools for adopting a sociological perspective in order to better understand their own lives and the lives of others. Emphasis on how sociologists think about the social world, how they research that world, and what we know about the social world based on sociological research. From our most personal experiences such as our identities and our interactions with others to the broader organization of institutions such as family, government, media, religion, economy and education, students will be encouraged to explore how social forces shape their own experiences and life chances and the experiences and life chances of others. *Melzer, Verduzco-Baker, Staff.*

### ANTH 105: An Introduction to Anthropology

(1 Unit)
What does it mean to be "human"? How can we understand human variation and change? This course provides a basic

introduction to anthropology, with an emphasis on cultural anthropology. It also explores archaeology, biological anthropology, and linguistics. *Chase, Harnish, Webb.*

### SOC 324: Quantitative Social Research

(1 Unit)
Prerequisite: SOC 101 and junior standing, or permission of instructor.
An overview of quantitative social research methods and statistics. Topics include problem formulation and connection between theories and research; research designs, measurement and sampling techniques; ethical issues in research; data processing and data analysis with discussion of descriptive statistics; hypothesis testing and chi-square tests of significance; correlation; and multiple regression models. Students design and carry out their own independent research projects in addition to an extensive application of SPSS in laboratory assignments using secondary data. *Staff.*

### ANTH 325: Methods in Anthropology

(1 Unit)
ANTH 105, junior standing recommended
How do anthropologists practice their craft? What exactly do they do "out there" in the field and what is unique about their modes of studying the human experience? This course examines the primary methods and ethical issues involved in anthropological fieldwork. Particular attention will be paid to research design, participant observation, and the representation of cultures through ethnographic writing and museum curation. *Harnish.*

EITHER

### ANTH 315: Anthropological Theory

(1 Unit)
ANTH 105, junior standing recommended
This course questions what anthropologists should study and how they should study it by examining key theories and theorists that have shaped the discipline. By focusing on the foundational works comprising the "anthropological cannon," the course considers how the basic assumptions, research methods, and social conditions of anthropological practice have changed over time. This overview of the history of theorizing about society and culture allows for examination of the discipline's past, present, and future. *Webb.*

OR

### SOC 312: Sociological Theory

(1 Unit)
Prerequisite: SOC 101 and junior standing, or permission of instructor.
An overview of sociological theory from classical to contemporary, and an assessment of how these theories frame research and analysis. Theorists range from the foundational work of Marx, Durkheim and Weber, to the more recent work of Parsons, Goffman and a number of critical and post-structuralist authors. Highly recommended for students who intend to do graduate work in the social sciences. *Verduzco-Baker.*

AND

## Two ANTH and Two SOC courses:

Two of these must be at the 300-level, at least one of which must be a seminar numbered 350 or higher.

## Notes:

- All courses counting towards the major must be taken for a numerical grade, except those offered only on a credit/no credit basis.
- No more than one unit of internship credit may be counted toward the major.
- No more than two units from an off-campus study program may be counted toward the major.

# Anthropology Minor

## Requirements for Minor in Anthropology

## Five Units in Anthropology, Including:

### ANTH 105: An Introduction to Anthropology

(1 Unit)
What does it mean to be "human"? How can we understand human variation and change? This course provides a basic introduction to anthropology, with an emphasis on cultural anthropology. It also explores archaeology, biological anthropology, and linguistics. *Chase, Harnish, Webb.*

### ANTH 315: Anthropological Theory

(1 Unit)
ANTH 105, junior standing recommended
This course questions what anthropologists should study and how they should study it by examining key theories and theorists that have shaped the discipline. By focusing on the foundational works comprising the "anthropological cannon," the course considers how the basic assumptions, research methods, and social conditions of anthropological practice have changed over time. This overview of the history of theorizing about society and culture allows for examination of the discipline's past, present, and future. *Webb.*

### ANTH 325: Methods in Anthropology

(1 Unit)
ANTH 105, junior standing recommended
How do anthropologists practice their craft? What exactly do they do "out there" in the field and what is unique about their modes of studying the human experience? This course examines the primary methods and ethical issues involved in anthropological fieldwork. Particular attention will be paid to research design, participant observation, and the representation of cultures through ethnographic writing and museum curation. *Harnish.*

## Additional Requirements

- Students majoring in anthropology or sociology may not complete a minor in the department.
- All anthropology courses must be taken for a numerical grade, except those offered only on a credit/no credit basis.
- No more than one unit of internship credit may be counted toward the minor.
- No more than one unit from and off-campus study program may be counted toward the minor.

# Anthropology, B.A.

# Requirements for Major in Anthropology

## Eight Units Including:

### ANTH 105: An Introduction to Anthropology

(1 Unit)
What does it mean to be "human"? How can we understand human variation and change? This course provides a basic introduction to anthropology, with an emphasis on cultural anthropology. It also explores archaeology, biological anthropology, and linguistics. *Chase, Harnish, Webb.*

### ANTH 315: Anthropological Theory

(1 Unit)
ANTH 105, junior standing recommended
This course questions what anthropologists should study and how they should study it by examining key theories and theorists that have shaped the discipline. By focusing on the foundational works comprising the "anthropological cannon," the course considers how the basic assumptions, research methods, and social conditions of anthropological practice have changed over time. This overview of the history of theorizing about society and culture allows for examination of the discipline's past, present, and future. *Webb.*

### ANTH 325: Methods in Anthropology

(1 Unit)
ANTH 105, junior standing recommended
How do anthropologists practice their craft? What exactly do they do "out there" in the field and what is unique about their modes of studying the human experience? This course examines the primary methods and ethical issues involved in anthropological fieldwork. Particular attention will be paid to research design, participant observation, and the representation of cultures through ethnographic writing and museum curation. *Harnish.*

AND

## Two ANTH courses at the 300-level:

At least one of which must be a seminar course numbered 350 or higher.

## Notes:

- All courses counting towards the major must be taken for a numerical grade, except those offered only on a credit/no credit basis.
- No more than one unit of internship credit may be counted toward the major.
- No more than two units from an off-campus study program may be counted toward the major.
- Students may apply one SOC course toward the ANTH major.
- All anthropology majors are strongly encouraged to study a foreign language and/or study abroad for a semester. Students anticipating graduate work are advised to take additional methods courses, including SOC 324: *Quantitative Social Research* and/or SOC 323: *Qualitative Social Research*

# Anthropology/Sociology Minor

## Requirements for Minor in Anthropology/Sociology

## Five Units Including:

### SOC 101: An Introduction to Sociology

(1 Unit)
Provides students with the analytic tools for adopting a sociological perspective in order to better understand their own lives and the lives of others. Emphasis on how sociologists think about the social world, how they research that world, and what we know about the social world based on sociological research. From our most personal experiences such as our identities and our interactions with others to the broader organization of institutions such as family, government, media, religion, economy and education, students will be encouraged to explore how social forces shape their own experiences and life chances and the experiences and life chances of others. *Melzer, Verduzco-Baker, Staff.*

### ANTH 105: An Introduction to Anthropology

(1 Unit)
What does it mean to be "human"? How can we understand human variation and change? This course provides a basic introduction to anthropology, with an emphasis on cultural anthropology. It also explores archaeology, biological anthropology, and linguistics. *Chase, Harnish, Webb.*

## One of the following:

### SOC 312: Sociological Theory

(1 Unit)
Prerequisite: SOC 101 and junior standing, or permission of instructor.
An overview of sociological theory from classical to contemporary, and an assessment of how these theories frame research and analysis. Theorists range from the foundational work of Marx, Durkheim and Weber, to the more recent work of Parsons, Goffman and a number of critical and post-structuralist authors. Highly recommended for students who intend to do graduate work in the social sciences. *Verduzco-Baker.*

### ANTH 315: Anthropological Theory

(1 Unit)
ANTH 105, junior standing recommended
This course questions what anthropologists should study and how they should study it by examining key theories and theorists that have shaped the discipline. By focusing on the foundational works comprising the "anthropological cannon," the course considers how the basic assumptions, research methods, and social conditions of anthropological practice have changed over time. This overview of the history of theorizing about society and culture allows for examination of the discipline's past, present, and future. *Webb.*

### SOC 323: Qualitative Social Research

(1 Unit)
Prerequisite: SOC 101 and junior standing, or permission of instructor.

An overview of qualitative social research methods with a focus on three key forms: ethnography, document analysis and interview. Examines research design and a variety of types of data collection and analysis as well as considering ethical issues in social research. Students design and carry out their own research project based on that semester's theme. *Verduzco-Baker.*

### SOC 324: Quantitative Social Research

(1 Unit)
Prerequisite: SOC 101 and junior standing, or permission of instructor.
An overview of quantitative social research methods and statistics. Topics include problem formulation and connection between theories and research; research designs, measurement and sampling techniques; ethical issues in research; data processing and data analysis with discussion of descriptive statistics; hypothesis testing and chi-square tests of significance; correlation; and multiple regression models. Students design and carry out their own independent research projects in addition to an extensive application of SPSS in laboratory assignments using secondary data. *Staff.*

### ANTH 325: Methods in Anthropology

(1 Unit)
ANTH 105, junior standing recommended
How do anthropologists practice their craft? What exactly do they do "out there" in the field and what is unique about their modes of studying the human experience? This course examines the primary methods and ethical issues involved in anthropological fieldwork. Particular attention will be paid to research design, participant observation, and the representation of cultures through ethnographic writing and museum curation. *Harnish.*

## Notes:

- Students majoring in anthropology or sociology may not complete a minor in the department.
- All courses counting towards the minor must be taken for a numerical grade, except those offered only on a credit/no credit basis.
- No more than one unit of internship credit may be counted toward the minor.
- No more than one unit from an off-campus study program may be counted toward the minor.
- Students completing a major in the department may not complete the Minor in Anthropology and Sociology.

# Sociology Minor

## Requirements for Minor in Sociology

## Five Units in Sociology, Including:

### SOC 101: An Introduction to Sociology

(1 Unit)
Provides students with the analytic tools for adopting a sociological perspective in order to better understand their own lives and the lives of others. Emphasis on how sociologists think about the social world, how they research that world, and what we know about the social world based on sociological research. From our most personal experiences such as our identities and our interactions with others to the broader organization of institutions such as family, government, media, religion, economy and education, students will be encouraged to explore how social forces shape their own experiences and life chances and the experiences and life chances of others. *Melzer, Verduzco-Baker, Staff.*

### SOC 312: Sociological Theory

(1 Unit)
Prerequisite: SOC 101 and junior standing, or permission of instructor.
An overview of sociological theory from classical to contemporary, and an assessment of how these theories frame research and analysis. Theorists range from the foundational work of Marx, Durkheim and Weber, to the more recent work of Parsons, Goffman and a number of critical and post-structuralist authors. Highly recommended for students who intend to do graduate work in the social sciences. *Verduzco-Baker.*

and either

### SOC 323: Qualitative Social Research

(1 Unit)
Prerequisite: SOC 101 and junior standing, or permission of instructor.
An overview of qualitative social research methods with a focus on three key forms: ethnography, document analysis and interview. Examines research design and a variety of types of data collection and analysis as well as considering ethical issues in social research. Students design and carry out their own research project based on that semester's theme. *Verduzco-Baker.*

**OR**

### SOC 324: Quantitative Social Research

(1 Unit)
Prerequisite: SOC 101 and junior standing, or permission of instructor.
An overview of quantitative social research methods and statistics. Topics include problem formulation and connection between theories and research; research designs, measurement and sampling techniques; ethical issues in research; data processing and data analysis with discussion of descriptive statistics; hypothesis testing and chi-square tests of significance; correlation; and multiple regression models. Students design and carry out their own independent research projects in addition to an extensive application of SPSS in laboratory assignments using secondary data. *Staff.*

## Additional Requirements

- All sociology courses must be taken for a numerical grade, except those offered only on a credit/no credit basis.
- No more than one unit of internship credit may be counted toward the minor.
- No more than one unit from an off-campus study program may be counted toward the major.

# Sociology, B.A.

## Requirements for Major in Sociology

## A Minimum of Eight Units, Including:

### SOC 101: An Introduction to Sociology

(1 Unit)
Provides students with the analytic tools for adopting a sociological perspective in order to better understand their own lives and the lives of others. Emphasis on how sociologists think about the social world, how they research that world,

and what we know about the social world based on sociological research. From our most personal experiences such as our identities and our interactions with others to the broader organization of institutions such as family, government, media, religion, economy and education, students will be encouraged to explore how social forces shape their own experiences and life chances and the experiences and life chances of others. *Melzer, Verduzco-Baker, Staff.*

### SOC 312: Sociological Theory

(1 Unit)
Prerequisite: SOC 101 and junior standing, or permission of instructor.
An overview of sociological theory from classical to contemporary, and an assessment of how these theories frame research and analysis. Theorists range from the foundational work of Marx, Durkheim and Weber, to the more recent work of Parsons, Goffman and a number of critical and post-structuralist authors. Highly recommended for students who intend to do graduate work in the social sciences. *Verduzco-Baker.*

### SOC 323: Qualitative Social Research

(1 Unit)
Prerequisite: SOC 101 and junior standing, or permission of instructor.
An overview of qualitative social research methods with a focus on three key forms: ethnography, document analysis and interview. Examines research design and a variety of types of data collection and analysis as well as considering ethical issues in social research. Students design and carry out their own research project based on that semester's theme. *Verduzco-Baker.*

### SOC 324: Quantitative Social Research

(1 Unit)
Prerequisite: SOC 101 and junior standing, or permission of instructor.
An overview of quantitative social research methods and statistics. Topics include problem formulation and connection between theories and research; research designs, measurement and sampling techniques; ethical issues in research; data processing and data analysis with discussion of descriptive statistics; hypothesis testing and chi-square tests of significance; correlation; and multiple regression models. Students design and carry out their own independent research projects in addition to an extensive application of SPSS in laboratory assignments using secondary data. *Staff.*

AND

## Two SOC courses at the 300-level:

At least one of which must be a seminar course numbered 350 or higher.

## Notes:

- All courses counting towards the major must be taken for a numerical grade, except those offered only on a credit/no credit basis.
- No more than one unit of internship credit may be counted toward the major.
- No more than two units from an off-campus study program may be counted toward the major.
- Students may apply one ANTH course toward the SOC major.
- Students anticipating graduate work are advised to pursue additional methods training, including ANTH 325: Methods in Anthropology.

# Art and Art History

# Faculty

**Michael Dixon**, chair and professor.
B.F.A., Arizona State University; M.F.A., University of Colorado at Boulder. Appointed 2008.

**Nancy Demerdash-Fatemi**, assistant professor.
B.A., University of Wisconsin-Madison; M.S., Massachusetts Institute of Technology; Ph.D. Princton University. Appointed 2018.

**Ashley Feagin**, assistant professor.
B.A., McNeese State University; M.F.A., Louisiana Tech University. Appointed 2013.

Shuana Merriman, assistant professor.

B.F.A., Alfred University; M.F.A., The Ohio State University. Appointed 2020.

**Emmeline Solomon**, assistant professor.
B.F.A., Maine College of Art; M.F.A., Washington University. Appointed 2019.

**Bille Wickre**, professor.
B.S., Dakota State University; M.A., University of Iowa; Ph.D., University of Michigan. Appointed 1992.

# Introduction

The visual arts have always been an important part of human culture. Individual expression, the shaping of cultural values, and the creation of beauty have been among the traditional functions of art. Artists invest objects with meaning through processes that are themselves significant. When objects become part of the larger culture, artists and audiences interact with each other and with the world around them in ways that are aesthetically and intellectually enhanced. The arts ask us to see more clearly, think more deeply and respond with greater passion to the realities of human existence.

Integral to a liberal arts education, study of the arts encourages critical thinking, self-reflection, personal growth, and the mastery of a variety of creative, intellectual and technical skills. In both art and art history courses, students gain abilities and confidence to conceive, analyze and understand works of art in a variety of forms and to pursue lifelong learning in the arts. Art courses encourage individual creativity, provide a foundation of skills to enable artists to create objects or performances of lasting significance, and challenge students to new critical awareness. Skills of analysis, critical thinking and writing, and a grounding in historical and cultural contexts form the basis of the study of art history. Drawing upon archaeology, religious studies, social history, contemporary critical theory and other fields of knowledge, art history helps students realize relationships between art and life.

Majors choose either a bachelor of arts degree (B.A.) in art or art history or a bachelor of fine arts degree (B.F.A.) in art. The B.A. in art provides a broad grounding in major studio areas including drawing, painting, printmaking, sculpture, ceramics, computer art, book art, video and photography. Students who wish to do more intense and focused work in art may apply for the B.F.A. program. The B.F.A. is recommended for students who will pursue graduate work in art and/or a career in the arts. Students who pursue a B.A. in art history develop research, writing, verbal and critical skills preparatory for graduate studies or careers in a variety of arenas. Art and art history majors regularly add a second major preparatory to a wide array of careers. For example, students may combine majors in art and psychology as part of their preparation for careers in art therapy. Students may choose a minor in either art or art history.

Art and Art History Department Website

# Career Opportunities

Albion graduates in both art and art history bring to professional careers or graduate studies outstanding abilities in critical and creative thought, technical knowledge and skills, and a broad-based approach to problem-solving fostered by the liberal arts tradition. Recent graduates have pursued advanced studies in many specific studio areas, art history, arts management, animation, graphic art and architecture. Many enjoy careers in design, communications, World Wide Web design, advertising, museum and gallery positions, art therapy and education.

# Special Features

Bobbitt Visual Arts Center houses the Department of Art and Art History, a public auditorium and two galleries for exhibiting the College art collection, professional artists' and student work. Its spacious and well-equipped facilities include painting and drawing studios; a complete photography lab with a lighting studio and darkrooms that support black and white, color, and digital photography; and a printmaking studio where students explore relief, lithographic, intaglio, and letterpress printing. The sculpture studios comprise a complete woodshop, a welding lab, areas for stone carving and other types of three dimensional production. Students studying ceramics work in spacious studios for throwing, handbuilding and slip casting, and fire their work in electric, raku and gas reduction-fired or wood kilns. Art students have 24-hour access to the general studios. The department houses a computer arts lab, dedicated to the visual arts. The lab is equipped with computers, scanners, color printers and a digital video editing suite. Computer technology is integrated into studio courses as an art-making tool, and into art history courses as a way to access distant museums and sites, and as a tool of analysis.

The Bobbitt Visual Arts Center galleries are home to 10 exhibitions each year, offering students a chance to view artwork by contemporary artists and to exhibit their own work. The Martha Dickinson Print Gallery highlights selections from the College's permanent collection of nearly 2,500 prints dating from the fifteenth century through the twenty-first century. The Elsie Munro Gallery hosts changing contemporary art exhibitions.

The Philip C. Curtis Artist-in-Residence program enables the department to bring emerging artists to campus every year. Students are encouraged to interact informally and to occasionally collaborate with these talented artists as they produce their work in Bobbitt.

Art and art history students often participate in off-campus programs such as the New York Arts Program, in which they work as interns with art professionals, including architects, interior designers, graphic designers, painters, gallery owners, curators, sculptors, photographers, medical illustrators, video and performance artists, and art therapists. Numerous other internships, off-campus experiences and international study programs offer excellent opportunities for art and art history students.

A number of scholarships are awarded to prospective students who have demonstrated achievement in art or art history. These can be renewed each year and are not limited to art or art history majors. Additional scholarships are available to upper-level art and art history majors who have demonstrated outstanding accomplishments in their specialty.

# Departmental Diversity Statement

The Department of Art and Art History is committed to providing an open and welcoming environment to individuals of diverse ethnic, religious or racial backgrounds, geographic and cultural origins, class status, sexual orientation and to those of all physical abilities. We believe that individual expression in the form of artistic creation, analysis and dialogue is essential to the maintenance of human life and the creation of a humane and just society. To this end we will:

- Maintain facilities that are accessible to all;
- Attempt to include within our curriculum broad perspectives;
- Encourage artistic creation and analysis that reflects a diversity of viewpoints and individual experiences;
- Provide in our galleries and collections of prints, objects and other visual materials, art work that reflects the broadest spectrum of the human experience;

- Provide opportunities for advanced study that explore issues of diversity;
- Cooperate with other areas of the College to further the diversity efforts of the institution.

# Departmental Policy on Advanced Placement Credit

Students who earn a 4 or 5 on the Advanced Placement (AP) exam in art will receive credit for one art elective.

# Student Learning Outcomes

**BACHELOR OF FINE ARTS**

Art

BFA Majors will be able to...

- *Generate* their own independent conceptual ideas.
- *Apply* the skill sets of their chosen medium(s).
- *Discuss* the formal qualities of their work.
- *Argue* or *advocate for* the meanings of artworks.
- *Analyze* artworks using theory.
- *Formulate* a plan for what is next.

**MAJORS**

Art

Art Majors will be able to...

- *Generate* their own independent conceptual ideas.
- *Apply* the skill sets of their chosen medium(s).
- *Discuss* the formal qualities of their work.
- *Formulate* a plan for what is next.

Art HIstory

Art History Majors will be able to...

- *Identify* important works of art.
- *Explain* how works of art reflect, participate in, and construct the cultures in which they are created.
- *Analyze* artworks using theory.
- *Argue* or *advocate for* the meaings of artworks.

**MINORS**

Art Minors

Art Minors will be able to...

- *Generate* their own independent conceptual ideas.
- *Apply* the skill sets of their chosen medium(s).
- *Discuss* the formal qualities of their work.

Art History Minors

Art History Minor will be able to...

- *Identify* important works of art.
- *Explain* how works of art reflect, participate in, and construct the cultures in which they are created.
- *Anaylyze* artworks using theory.

# Art History Minor

## Requirements for Minor in Art History

## Five Units in Art History, Including:

### ARTH 117: Global Art History Before 1400

(1 unit)
This course provides students with a survey of artifacts, art objects, and architectural sites from across the globe, before the year 1400. Through focused analyses of visual cultures and built environments across different spaces and times, this record of the deep past demonstrates how humanity, arguably, has always been creatively expressive. It also illustrates how closely tied artistic patronage is to economic and political power. This course underscores how art-making is rooted in the exchange of ideas inasmuch as the economic and political realities of trade, migrations, pilgrimage, diplomacy, war and conquest. Students will explore how various cultures adopted artistic practices shaped by social networks, economic exchanges, religious beliefs, political power and historical events before the year 1400. *Demerdash, Wickre.*

OR

### ARTH 118: Global Art History After 1400

(1 unit)
This course provides students with a survey of artifacts, art objects, and architectural sites from across the globe, beyond the year 1400. It examines the histories of artistic and architectural traditions across many cultures and geographies of the world, from the early modern period to the present day. Through focused analyses of visual cultures and built environments across different spaces and times, this course demonstrates how closely tied artistic patronage is to economic and political power. This course underscores how art-making is rooted in the exchange of ideas inasmuch as the economic and political realities of trade, migrations, pilgrimage, diplomacy, war, conquest, slavery, colonialism and imperialism, and the spread of technologies. Students will explore how various cultures adopted artistic conventions shaped by social networks, economic exchanges, religious beliefs, political power and historical events after the year 1400. *Demerdash, WIckre.*

- A minimum of two units from any art history course at the 200-level
- A minimum of one unit of art history at the 300-level or higher.
- One additional unit in art history.

# Art History, B.A.

# Requirements for Major toward B.A. in Art History

## A Minimum of Eight Units in Art History, Including:

### ARTH 117: Global Art History Before 1400

(1 unit)
This course provides students with a survey of artifacts, art objects, and architectural sites from across the globe, before the year 1400. Through focused analyses of visual cultures and built environments across different spaces and times, this record of the deep past demonstrates how humanity, arguably, has always been creatively expressive. It also illustrates how closely tied artistic patronage is to economic and political power. This course underscores how art-making is rooted in the exchange of ideas inasmuch as the economic and political realities of trade, migrations, pilgrimage, diplomacy, war and conquest. Students will explore how various cultures adopted artistic practices shaped by social networks, economic exchanges, religious beliefs, political power and historical events before the year 1400. *Demerdash, Wickre.*

### ARTH 118: Global Art History After 1400

(1 unit)
This course provides students with a survey of artifacts, art objects, and architectural sites from across the globe, beyond the year 1400. It examines the histories of artistic and architectural traditions across many cultures and geographies of the world, from the early modern period to the present day. Through focused analyses of visual cultures and built environments across different spaces and times, this course demonstrates how closely tied artistic patronage is to economic and political power. This course underscores how art-making is rooted in the exchange of ideas inasmuch as the economic and political realities of trade, migrations, pilgrimage, diplomacy, war, conquest, slavery, colonialism and imperialism, and the spread of technologies. Students will explore how various cultures adopted artistic conventions shaped by social networks, economic exchanges, religious beliefs, political power and historical events after the year 1400. *Demerdash, WIckre.*

### ARTH 317: Art and Theory

(1 Unit)
Introduces students to a variety of methods used to interpret works of art. Examines the specialized literature of art history from the sixteenth century to the present. Theories and methods will be applied to art from all periods. *Wickre.*

### ARTH 326: Issues in Contemporary Art

(1 Unit)
Examines issues, theory and art from the 1960s to the present, from the standpoint of theory, practice and the objects produced. Focuses on painting, sculpture, and new media from around the world and emphasizes critical reading, writing, and discussion. *Wickre.*

## A minimum of one unit at the 200-level before 1400:

### ARTH 208: Early Christian and Byzantine Art

(1 Unit)
Provides a foundation of knowledge in Early Christian and Byzantine art, including painting, sculpture, textile, metalwork, glasswork, architecture and illumination created from the period of the late Roman Empire and early

Middle Ages to the fifteenth century in the Eastern Empire, or Byzantium. Emphasizes the identification of works, styles, artists and the broad political/religious contexts in which pieces of art were conceived and executed. *Staff.*

### ARTH 212: Art and Religion of the Medieval World

(1 Unit)
Studies art and Christianity in Western Europe from the late Roman Empire to the fifteenth century, including consideration of style and iconography, through art forms ranging from catacomb paintings to manuscripts for private devotion to Gothic cathedrals. Considers interpretations of the Middle Ages from the ninth century to the present, emphasizing how these interpretations reflect and construct the intellectual traditions of their authors. *Staff.*

## A minimum of two units at the 200 level from after 1400:

### ARTH 213: Art and Science of Leonardo's Day

(1 Unit)
Investigates Italian Renaissance painting and sculpture from 1400 to 1550, including works by Giotto, Piero, Leonardo, Michelangelo and others. Considers interpretations of Renaissance art, architecture and science, and the concepts of Humanism and Renaissance from the time of Petrarch to the present. *Wickre.*

### ARTH 214: Baroque Art

(1 Unit)
Explores the diversity of artistic styles in Europe between 1600 and 1750. Considers the expanding concepts of world geography, trade and colonization and its impact on art, an awakening sense of self for both artists and patrons, systems of training, theories of gender in the production and consumption of art works, and ways of describing and inscribing gender, race, class and sexual orientation in baroque art. *Wickre.*

### ARTH 216: Modern and Contemporary Art

(1 Unit)
Survey of twentieth and twenty-first century European and American painting, sculpture, photography, and time arts. Examines stylistic trends, changes in ideas about the nature and purposes of art and the relationships between art and society. Discussion of the impact of contemporary critical theory on the evolution of the art of the twentieth century. *Wickre.*

### ARTH 217: American Art, 1600-1913

(1 Unit)
Examines the major cultural movements, artists and art works in what would become the United States from the colonial period to the advent of modernism with the Armory Show in New York in 1913. *Wickre.*

### ARTH 219: Impressionism: Précis to Prologue

(1 Unit)
Critically examines paintings of the Impressionists in France in the context of historical documents from the period, contemporary critical writings about the artists and paintings, and the art historical texts generated about the art. A study of Impressionism's roots in French romanticism and realism introduces the course. Special attention is paid to the particular historical circumstances that gave rise to Impressionism as a movement, and to the gendered nature of both the production and reception of Impressionist paintings. *Wickre.*

### ARTH 220: American Indian Art

(1 Unit)
Examines the art history of American Indian cultures in the United States, with a focus on traditional arts at the time of European contact, in the immediate aftermath of that contact, and on the emergence of a contemporary arts culture within American Indian contexts. Also considers how mythology and stereotyping have created an image of "the Indian" and how that image was and is used in majority culture. Presents a broad array of resources, including Albion College's collection of American Indian objects and prints, and public and private art collections. *Wickre.*

## A minimum of one unit at the 300-level or higher:

### ARTH 310: Women and Art

(1 Unit)
Examines the roles women have played as creators, subjects, patrons and critics of art through history. Special emphasis will be placed on theories of the social construction of gender through art in all periods and on responses of contemporary women artists to such constructions. *Wickre.*

### ARTH 311: Art as Political Action

(1 Unit)
Examines art that invites or encourages social awareness and/or action. Includes studies of "high art" media, such as photography, painting and sculpture, and non-traditional art forms including performance art, public murals, crafts, environmental art and others. Thematically arranged around politicized issues such as race, rape and domestic violence, concepts of the body, pacifism and war, poverty, illness and AIDS. The course begins with political movements that relied heavily on visual images to achieve their purposes. *Wickre.*

### ARTH 312: Race and Its Representation in American Art

(1 Unit)
Examines representations of individuals and groups who traditionally have been viewed as "others": African Americans, Native Americans, Asians and Chicanos/Chicanas as contrasted with images of members of the dominant culture. Considers how visual art has served to reflect social conditions and situations and to construct identities for all ethnic groups in the American psyche. *Wickre.*

### ARTH 313: History of Prints

(1 Unit)
Focuses on how artists have used the forms and techniques of printmaking to express themselves visually from the fifteenth century to the present. The course uses three approaches: (1) art history lectures and discussions based on readings; (2) connoisseurship in studying prints from the College's permanent collection; and (3) practical application in producing prints in some of the major printmaking techniques. Students will begin to understand how the potential and limitations of various traditional techniques enable particular types of visual communication. Emphasis is placed on student-facilitated learning, exploration, discovery and collaborative processes. *Wickre, McCauley.*

### ARTH 315: Earth, Art, and the Environment

(1 Unit)
Examines American (U.S.) and European art and architecture that interacts with the environment and calls attention to the benefits and consequences of human interaction with the environment in a national and global context. Focuses on

art, architecture and design projects produced from 1960 to the present and materials that set the context for artistic concerns about the environment beginning in the nineteenth century. *Wickre.*

### ARTH 320: Feminist Art

(1 Unit)
The 1970s Feminist Art Movement introduced to the art world a revolution in attitudes and practices. The significant reverberations of that movement are felt to the present. Covers the social context, causes and effects, and major players in the Feminist Art Movement as well as its continuing impact. *Wickre.*

## Additional Requirements

It is recommended that students select at least one unit at the 200- or 300-level from four of the following areas: Ancient/Classical (ARTH 117), Medieval (ARTH 208, 212), Renaissance (ARTH 213), Baroque (ARTH 214), Eighteenth and Nineteenth Centuries (ARTH 217, 219), Modern and Contemporary (ARTH 216, 311, 312, 315, 320, 326), American (ARTH 217) or non-western (ARTH 220).

Art history majors are required to participate in the Senior Art History Majors Symposium.

One unit of a cognate of any studio art course. Art 102, 103 or 121 are recommended.

All courses counted toward the art history major must be taken for a numerical grade.

Courses taken at an approved off-campus program may be substituted for Albion College courses with the permission of the department.

Art history students who are considering graduate study are strongly urged to complete at least two semesters of a foreign language at the 100 level or above. Students should be guided by individual language assessments done by the Department of Modern Languages and Cultures.

# Art Minor

## Requirements for Minor in Art

## Six Units in Art, Including:

### ART 102: Creative Process 2-D

(1 Unit)
Designed to provide the student with the ability to work with and appreciate basic forms and concepts of art in both traditional and contemporary modes. Lecture and studio. *Dixon, Feagin, McCauley.*

### ART 103: Creative Process 3-D

(1 Unit)
Designed to introduce the student to fundamental concepts in creating and viewing three-dimensional art. Lecture and studio. *Chytilo.*

### ART 121: Drawing

(1 Unit)
Designed to introduce the beginning student to a variety of drawing media, subject matter and drawing concepts. May be taken concurrently with Art 102. *Dixon.*

## A Minimum of Two Units From:

### ART 201: Digital Tools I

(1 Unit)
Prerequisite: ART 121 or permission of instructor.
Designed to familiarize students with basic skills and techniques in creating digitally assisted visual art. Initial projects serve to introduce software tools; later projects increasingly reinforce skill development while concentrating on idea generation and individual approaches to art making. Peripheral hardware, including scanners, digital cameras, and inkjet and laser printers, are utilized in generating work. *Feagin.*

### ART 222: Advanced Drawing: Figure

(1/2 Unit)
Prerequisite: ART 121.
The human form is represented in a variety of media. May be repeated for credit. *Dixon.*

### ART 223: Advanced Drawing: Figure

(1 Unit)
Prerequisite: ART 121.
The human form is represented in a variety of media. May be repeated for credit. *Dixon.*

### ART 231: Painting I

(1 Unit)
Prerequisite: ART 121.
An introduction to the vocabulary, materials and methods of oil painting. A range of technical and aesthetic considerations will be addressed. *Dixon.*

### ART 241: Photography I

(1 Unit)
An introduction to the technical and aesthetic aspects of photography and its cultural significance: photo literacy, compositional elements, and the creation and critique of work through the use of emerging technology in the field of photography. *Feagin.*

### ART 251: Printmaking I

(1 Unit)
Prerequisite: ART 121 or ART 102.
An introduction to relief and intaglio print processes including woodcut, linocut, metal plate etching, drypoint and aquatint. Idea generation emphasized. *McCauley.*

### ART 261: Ceramics I

(1 Unit)
An introduction to ceramics as an art form. Begins with basic hand-forming and conceptual problem-solving in clay and then covers throwing, glazing and various firing methods. *Chytilo.*

**OR**

### ART 262: Pottery and Japanese Traditions

(1 Unit)
Explores the aesthetic traditions and political history of the Japanese tea ceremony and pottery-making. Emphasizes the artistic and meditative execution of tea making with wares of art for tea making and tea consumption, in addition to the study of the practicality of tea as a vehicle for negotiation, deliberation and social interaction in Japan. Same as International Studies 262. Same as INTN 262 . *Chytilo/Dabney.*

### ART 271: Sculpture I

(1 Unit)
Prerequisite: ART 103 or permission of instructor.
Problems dealing with concepts in three-dimensional space and form, and the introduction to the use of basic tools and techniques with wood, stone, metal and mixed media. *Chytilo.*

## A Minimum of One Unit of Art Numbered Above 200:

### ART 242: Intermediate Photography I

(.5 Unit)
Prerequisite: ART 241.
An introduction to the technical and aesthetic aspects of photography: basic functions of the camera, basic darkroom techniques, critique of work. *Feagin.*

### ART 243: Intermediate Photography 2

(.5 Unit)
Prerequisite: ART 242.
Building on assignments from ART 242 with an emphasis on imaginative approaches and individual work. Explorations with various cameras and methods of printing. *Feagin.*

### ART 263: Intermediate Ceramics

(1/2 Unit)
Prerequisite: ART 261 or ART 262.

A continuation of the processes and techniques learned in ART 261 or ART 262. Emphasis is placed on creating innovative work with greater skill than acquired in previous classes. *Chytilo.*

## ART 264: Advanced Intermediate Ceramics

(1/2 Unit)
Prerequisite: ART 263.
A continuation of the processes and techniques learned in ART 263. Emphasis is placed on creating innovative work with greater skill than acquired in previous classes. *Chytilo.*

## ART 301: Video Art

(1 Unit)
An introduction to the use of video as a medium for individual expression and creativity. Basic video skills and procedures in planning and producing a video are presented through demonstrations, lectures and practice sessions. Working with digital cameras and Premiere editing software, participants become familiar with the operation of the video cameras and editing deck, sound recording, storyboarding, and lighting techniques. *Feagin.*

## ART 303: Digital Tools 2

(1 Unit)
Prerequisite: ART 201 or ART 241, or permission of instructor.
This course builds off of skills obtained in ART 201, Digital Tools 1. An advanced computer art studio course addressing the special visual and philosophical concerns around using technology in the process of making art. Reading, analysis and discussion of contemporary works, and creation of individual work are key components of this course. *Feagin.*

## ART 324: Advanced Drawing: Workshop

(1/2 Unit)
Prerequisite: ART 121.
Contemporary concepts and techniques related to drawing are explored through studio practice. May be repeated for credit. *Dixon, McCauley.*

## ART 325: Advanced Drawing: Workshop

(1 Unit)
Prerequisite: ART 121.
Contemporary concepts and techniques related to drawing are explored through studio practice. May be repeated for credit. *Dixon, McCauley.*

## ART 331: Painting II

(1 Unit)
Prerequisite: ART 231.
Assigned problems for individual solutions. Medium: oil. *Dixon.*

## ART 332: Painting III

(1 Unit)
Prerequisite: ART 331.
Individually assigned problems in advanced painting concepts and techniques. *Dixon.*

## ART 341: Photography II

(1 Unit)
Prerequisite: ART 241 or permission of instructor.
Advanced assignments in photography with emphasis on imaginative approach and individual work. Lecture and lab. Critique of work. *Feagin.*

## ART 343: Photography Workshop

(1 Unit)
Prerequisite: ART 342.
Individual exploration of technical and/or aesthetic issues in photographic media. *Feagin.*

## ART 344: Photography Workshop II

(1 Unit)
Prerequisite: ART 343.
A continuation of ART 343. *Feagin.*

## ART 345: Photography Workshop III

(1 Unit)
Prerequisite: ART 344.
A continuation of ART 344. Focuses on creation of a strong body of work in an area of personal interest, along with compilation into a matted portfolio with images and a well-developed artistic statement discussing the material and conceptual aspects of the work. *Feagin.*

## ART 346: Color Photography

(1 Unit)
Prerequisite: ART 241.
An advanced photography course introducing the basics of color photography. Covers color theory as applicable to photography, color exposure, color printing process and studio lighting. Emphasizes integrating process, materials and concept in an individualized body of work. *Feagin.*

## ART 351: Printmaking II

(1 Unit)
Prerequisite: ART 251.
Continuing study of relief and intaglio print processes with advanced applications. Development of personalized imagery emphasized. *McCauley.*

## ART 352: Printmaking III

(1 Unit)
Prerequisite: ART 351.

Advanced problems in relief and intaglio with emphasis on integration of print processes and development of personalized imagery. *McCauley.*

## ART 353: Printmaking Workshop I

(1 Unit)
Prerequisite: ART 352.
Workshops provided for concentrated development in all phases of printmaking. Discussion of traditional and contemporary printmaking in relation to individual problems. Concept development is strongly emphasized. *McCauley.*

## ART 354: Printmaking Workshop II

(1 Unit)
Prerequisite: ART 353.
Continuation of ART 353. *McCauley.*

## ART 355: Printmaking Workshop III

(1 Unit)
Prerequisite: ART 354.
Continuation of ART 354. *McCauley.*

## ART 356: Visual Poetry

(1 Unit)
A study of writing poetry and its presentation in printed form. Intended for writers and visual artists alike, this course teaches the fundamentals of writing poetry and letterpress printing. Participants both write their own poems and, using movable type and hand-operated printing presses, set and print their own poems as broadsides and artists' books. *McCauley, Mesa.*

## ART 357: Book Arts

(1 Unit)
Prerequisite: ART 121 and one other studio art course.
Designed to teach students the traditional and contemporary craft of handmade visual books. Students investigate book forms through hands-on demonstrations to gain experience in a wide range of book structures as preparation for individual creations. Exploration of a diverse range of media in the construction of individual books is encouraged and supported. *McCauley.*

## ART 361: Ceramics II

(1 Unit)
Prerequisite: ART 261.
A continuation of ART 261 with more advanced work in ceramic processes and theories including clay and glaze formulation. Emphasis also is placed on development of personal expression and direction with the medium. Laboratory and lecture. *Chytilo.*

## ART 362: Ceramics III

(1 Unit)
Prerequisite: ART 361.
Advanced problems in ceramic design. *Chytilo.*

## ART 363: Ceramics Workshop I

(1 Unit)
Prerequisite: ART 362.
Each semester students will explore a different technical and/or aesthetic subject of the ceramic processes on an individualized basis. *Chytilo.*

## ART 364: Ceramics Workshop II

(1 Unit)
Prerequisite: ART 363.
An emphasis is placed on the student's development in an area of personal interest. *Chytilo.*

## ART 365: Ceramics Workshop III

(1 Unit)
Prerequisite: ART 364.
Continuation of ART 364. A strong body of work accompanied by a group of images and a written thesis will be presented to the art faculty for review. *Chytilo.*

## ART 371: Sculpture II

(1 Unit)
Prerequisite: ART 271.
Individually arranged problems in advanced sculptural concepts and techniques. *Chytilo.*

## ART 373: Sculpture Workshop I

(1 Unit)
Prerequisite: ART 372.
Individually arranged exploration and development of specific sculptural directions. A more intense involvement in the visual and philosophical implications of a body of work is emphasized. *Chytilo.*

## ART 374: Sculpture Workshop II

(1 Unit)
Prerequisite: ART 373.
Continuation of ART 373. *Chytilo.*

## ART 375: Sculpture Workshop III

(1 Unit)
Prerequisite: ART 374.
Continuation of ART 374. A written statement discussing visual and philosophical aspects of a body of work with accompanying images will be presented to the art faculty for review. *Chytilo.*

### ART 381: Process

(1/2 Unit)
Prerequisite: Permission of instructor.
The process of making and conceiving art, often from a multi-media, interdisciplinary point of view. Examples: The concept of assemblage, photo-sensitive media, readings for current art, structural systems, critical studies of the college collections, color perception and performance, current drawing concepts. *Staff.*

### ART 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

## One Unit of a Cognate Art History Course, Either:

### ARTH 116: World Art

(1 Unit)
An introduction to world art in its historical context, considering the dominant arts of each continent framed within historical, religious, political, economic and social events. Incorporates basic tools of art historical analysis and criticism. *Wickre, Staff.*

# Art, B.A.

## Requirements for Major toward B.A. in Art

## Ten Units in Studio Art, Including:

### ART 102: Creative Process 2-D

(1 Unit)
Designed to provide the student with the ability to work with and appreciate basic forms and concepts of art in both traditional and contemporary modes. Lecture and studio. *Dixon, Feagin, McCauley.*

### ART 103: Creative Process 3-D

(1 Unit)
Designed to introduce the student to fundamental concepts in creating and viewing three-dimensional art. Lecture and studio. *Chytilo.*

### ART 121: Drawing

(1 Unit)
Designed to introduce the beginning student to a variety of drawing media, subject matter and drawing concepts. May be taken concurrently with Art 102. *Dixon.*

## A Minimum of Three Units From:

## ART 201: Digital Tools I

(1 Unit)
Prerequisite: ART 121 or permission of instructor.
Designed to familiarize students with basic skills and techniques in creating digitally assisted visual art. Initial projects serve to introduce software tools; later projects increasingly reinforce skill development while concentrating on idea generation and individual approaches to art making. Peripheral hardware, including scanners, digital cameras, and inkjet and laser printers, are utilized in generating work. *Feagin.*

## ART 222: Advanced Drawing: Figure

(1/2 Unit)
Prerequisite: ART 121.
The human form is represented in a variety of media. May be repeated for credit. *Dixon.*

## ART 223: Advanced Drawing: Figure

(1 Unit)
Prerequisite: ART 121.
The human form is represented in a variety of media. May be repeated for credit. *Dixon.*

## ART 231: Painting I

(1 Unit)
Prerequisite: ART 121.
An introduction to the vocabulary, materials and methods of oil painting. A range of technical and aesthetic considerations will be addressed. *Dixon.*

## ART 241: Photography I

(1 Unit)
An introduction to the technical and aesthetic aspects of photography and its cultural significance: photo literacy, compositional elements, and the creation and critique of work through the use of emerging technology in the field of photography. *Feagin.*

## ART 251: Printmaking I

(1 Unit)
Prerequisite: ART 121 or ART 102.
An introduction to relief and intaglio print processes including woodcut, linocut, metal plate etching, drypoint and aquatint. Idea generation emphasized. *McCauley.*

## ART 261: Ceramics I

(1 Unit)
An introduction to ceramics as an art form. Begins with basic hand-forming and conceptual problem-solving in clay and then covers throwing, glazing and various firing methods. *Chytilo.*

**OR**

## ART 262: Pottery and Japanese Traditions

(1 Unit)
Explores the aesthetic traditions and political history of the Japanese tea ceremony and pottery-making. Emphasizes the artistic and meditative execution of tea making with wares of art for tea making and tea consumption, in addition to the study of the practicality of tea as a vehicle for negotiation, deliberation and social interaction in Japan. Same as International Studies 262. Same as INTN 262 . *Chytilo/Dabney.*

### ART 271: Sculpture I

(1 Unit)
Prerequisite: ART 103 or permission of instructor.
Problems dealing with concepts in three-dimensional space and form, and the introduction to the use of basic tools and techniques with wood, stone, metal and mixed media. *Chytilo.*

- A minimum of three units at the 300-level or higher
- One additional studio art elective from any of the 200- and 300-level studio course offerings (1/2 or 1 unit).

## One Half-Unit Course:

### ART 296: Professional Practices in Art

(1/2 Unit)
Designed to provide the emerging artist with multiple experiences in preparation for professional opportunities in the fine arts. Must be taken spring semester of the senior year. (It is strongly recommended that students interested in graduate school take this class in the junior and senior year.) *Chytilo, Dixon, Feagin, McCauley.*

### ART 396: Professional Practices in Art

(1/2 Unit)
Designed to provide the emerging artist with multiple experiences in preparation for professional opportunities in the fine arts. Must be taken spring semester of the senior year. (It is strongly recommended that students interested in graduate school take this class in the junior and senior year.) *Chytilo, Dixon, Feagin, McCauley.*

## Three Units of Cognate Art History Courses, Including:

### ARTH 116: World Art

(1 Unit)
An introduction to world art in its historical context, considering the dominant arts of each continent framed within historical, religious, political, economic and social events. Incorporates basic tools of art historical analysis and criticism. *Wickre, Staff.*

### ARTH 326: Issues in Contemporary Art

(1 Unit)
Examines issues, theory and art from the 1960s to the present, from the standpoint of theory, practice and the objects produced. Focuses on painting, sculpture, and new media from around the world and emphasizes critical reading, writing, and discussion. *Wickre.*

- One other unit of art history at the 200-level or higher

## Additional Requirements

- All majors must take a three-course sequence in one medium or must propose a three-course related sequence.
- Art majors are required to participate in a junior review by department faculty and the senior art majors exhibition.
- All courses counted toward the major must be taken for a numerical grade.

# Art, B.F.A.

## Requirements for Major toward B.F.A. in Art

## No Fewer than 14 and No More than 21 Units in Studio Art, Including:

### ART 102: Creative Process 2-D

(1 Unit)
Designed to provide the student with the ability to work with and appreciate basic forms and concepts of art in both traditional and contemporary modes. Lecture and studio. *Dixon, Feagin, McCauley.*

### ART 103: Creative Process 3-D

(1 Unit)
Designed to introduce the student to fundamental concepts in creating and viewing three-dimensional art. Lecture and studio. *Chytilo.*

### ART 121: Drawing

(1 Unit)
Designed to introduce the beginning student to a variety of drawing media, subject matter and drawing concepts. May be taken concurrently with Art 102. *Dixon.*

- A minimum of six units at the 300- level or higher

## A Minimum of Four Units From:

### ART 201: Digital Tools I

(1 Unit)
Prerequisite: ART 121 or permission of instructor.
Designed to familiarize students with basic skills and techniques in creating digitally assisted visual art. Initial projects serve to introduce software tools; later projects increasingly reinforce skill development while concentrating on idea generation and individual approaches to art making. Peripheral hardware, including scanners, digital cameras, and inkjet and laser printers, are utilized in generating work. *Feagin.*

### ART 222: Advanced Drawing: Figure

(1/2 Unit)
Prerequisite: ART 121.
The human form is represented in a variety of media. May be repeated for credit. *Dixon.*

## ART 223: Advanced Drawing: Figure

(1 Unit)
Prerequisite: ART 121.
The human form is represented in a variety of media. May be repeated for credit. *Dixon.*

## ART 231: Painting I

(1 Unit)
Prerequisite: ART 121.
An introduction to the vocabulary, materials and methods of oil painting. A range of technical and aesthetic considerations will be addressed. *Dixon.*

## ART 241: Photography I

(1 Unit)
An introduction to the technical and aesthetic aspects of photography and its cultural significance: photo literacy, compositional elements, and the creation and critique of work through the use of emerging technology in the field of photography. *Feagin.*

## ART 251: Printmaking I

(1 Unit)
Prerequisite: ART 121 or ART 102.
An introduction to relief and intaglio print processes including woodcut, linocut, metal plate etching, drypoint and aquatint. Idea generation emphasized. *McCauley.*

## ART 261: Ceramics I

(1 Unit)
An introduction to ceramics as an art form. Begins with basic hand-forming and conceptual problem-solving in clay and then covers throwing, glazing and various firing methods. *Chytilo.*

## ART 262: Pottery and Japanese Traditions

(1 Unit)
Explores the aesthetic traditions and political history of the Japanese tea ceremony and pottery-making. Emphasizes the artistic and meditative execution of tea making with wares of art for tea making and tea consumption, in addition to the study of the practicality of tea as a vehicle for negotiation, deliberation and social interaction in Japan. Same as International Studies 262. Same as INTN 262 . *Chytilo/Dabney.*

## ART 271: Sculpture I

(1 Unit)
Prerequisite: ART 103 or permission of instructor.
Problems dealing with concepts in three-dimensional space and form, and the introduction to the use of basic tools and techniques with wood, stone, metal and mixed media. *Chytilo.*

## One Half-Unit Course:

### ART 296: Professional Practices in Art

(1/2 Unit)
Designed to provide the emerging artist with multiple experiences in preparation for professional opportunities in the fine arts. Must be taken spring semester of the senior year. (It is strongly recommended that students interested in graduate school take this class in the junior and senior year.) *Chytilo, Dixon, Feagin, McCauley.*

### ART 396: Professional Practices in Art

(1/2 Unit)
Designed to provide the emerging artist with multiple experiences in preparation for professional opportunities in the fine arts. Must be taken spring semester of the senior year. (It is strongly recommended that students interested in graduate school take this class in the junior and senior year.) *Chytilo, Dixon, Feagin, McCauley.*

## Four Units of Cognate Art History Courses, Including:

### ARTH 116: World Art

(1 Unit)
An introduction to world art in its historical context, considering the dominant arts of each continent framed within historical, religious, political, economic and social events. Incorporates basic tools of art historical analysis and criticism. *Wickre, Staff.*

### ARTH 326: Issues in Contemporary Art

(1 Unit)
Examines issues, theory and art from the 1960s to the present, from the standpoint of theory, practice and the objects produced. Focuses on painting, sculpture, and new media from around the world and emphasizes critical reading, writing, and discussion. *Wickre.*

- One other unit of art history at the 200-level or higher
- One other unit of art history at the 300-level or higher

## Additional Requirements

- Students may be admitted into the B.F.A. program by presenting a portfolio of their work to the art faculty preferably in their sophomore or junior year. Acceptance into the B.F.A. program is based on an evaluation of the portfolio and the student's previous performance in art and art history classes.
- Once accepted in the B.F.A. program, students are expected to maintain the high quality of their work. They must acquire a minimum of a 3.25 grade average in their art courses in order to graduate with a B.F.A degree. The B.F.A. degree requires a minimum of 34 units for graduation.
- All majors must take a three-course sequence in one medium or must propose a three-course related sequence.
- B.F.A. candidates are required to participate in a junior review by department faculty and the senior art majors exhibition.

# Biology

# Faculty

**Kenneth J. Saville**, chair and A. Merton Chickering Professor.
B.S., 1985, Western Michigan University; Ph.D., Syracuse University. Appointed 1995.

**Roger J. Albertson**, associate professor.
B.S., University of Colorado at Denver; Ph.D., University of Oregon. Appointed 2008.

**Abigail E. Cahill**, assistant professor.
B.A., Colgate University; Ph.D., Stony Brook University. Appointed 2016.

**Marcella D. Cervantes**, Assistant Professor.
B.S., University of Houston - Downtown; M.S., University of Oregon; Ph.D., University of Washington. Appointed 2017.

**Sheila Lyons-Sobaski**, associate professor.
B.S., University of Illinois, Urbana-Champaign; M.S., Kansas State University; Ph.D., University of Illinois, Urbana-Champaign. Appointed 2005.

**Ola Olapade**, professor.
B.Sc., M.Sc., Obafemi Awolowo University (Nigeria); M.S., Millersville University; Ph.D., Kent State University. Appointed 2006.

**Bradley J. Rabquer**, associate professor.
B.S., 2001, Bowling Green State University; Ph.D., 2006, University of Toledo. Appointed 2011.

# Introduction

The Biology Department's mission is to provide students with an understanding of, and an appreciation for, the living world, including the fundamental mechanisms that underlie all life. Students should understand the ways in which they are affected by living organisms and how their lives in turn have an impact on other living organisms and the biosphere. They should become proficient in the methods of science and aware of the processes that lead to discoveries in science. In course work, they should develop observational, analytical and communication skills, regardless of their chosen career path. Ultimately, biology is best understood by active involvement with organisms and the systems of life in laboratory and field settings, and in collaborative student-faculty research.

Biology Department Website

# Career Opportunities

Albion's biology program prepares students for employment or advanced studies in the health sciences (medicine, dentistry, veterinary medicine, physical therapy, etc.), environmental fields, biotechnology, teaching and many areas of research (academic, governmental, industrial, medical, etc.). Biology majors can also pursue an environmental sciences concentration or a neuroscience concentration.

# Research Opportunities

Students have numerous opportunities for individual research projects. Many of these projects result in honors theses, publications in professional journals and in presentations at professional meetings. Some projects are in collaboration with faculty; others are more independent. Courses in the Biology Department equip students with scientific skills and materials they need to do research. Outstanding students participate in nationally competitive summer research programs at major universities and research institutes.

# Special Features

The department also invites outstanding students to serve as laboratory teaching assistants. Advanced equipment in the biology facilities of Kresge Hall and in the Dow Analytical Laboratory in the

Norris Science Center provides unique opportunities for undergraduate laboratory studies and research, just as the 144-acre Whitehouse Nature Center adjacent to the campus provides opportunity for fieldwork.

# Departmental Policy on Advanced Placement Credit

Students who earn a 4 or 5 on the Advanced Placement (AP) exam in biology will receive one unit of credit for BIOL 190. This unit does not count toward the biology major but does count toward the graduation requirement of 32 units.

# Student Learning Outcomes

A student completing a major in Biology will be able to:

1. Articulate core concepts in biology, including evolution, at the molecular, cellular and ecological levels.

2. Apply the scientific method to questions in biology.

3. Perform major methods used to investigate biological phenomena, including methods used in molecular biology and bioinformatics, and methods used in the field to study biological populations, communities and ecological systems.

4. Evaluate scientific content within the primary literature.

5. Present scientific hypotheses and data in the formats used by practicing scientists.

6. Describe the relationship of biological knowledge to society including in the areas of human health and environmental sustainability.

*A student completing a Cell and Molecular Biology Minor will be able to:*

1. Apply core concepts in biology, including evolution, at the molecular, cellular and ecological levels.

2. Apply the scientific method to questions in biology.

3. Perform major methods used to investigate biological phenomena, including methods used in molecular biology and bioinformatics.

4. Evaluate scientific content within the primary literature.

5.  Present scientific hypotheses and data in the formats used by practicing scientists.

6. Describe the relationship of biological knowledge to society, primarily in the area of human health.

*A student completing an Environmental Biology Minor wil be able to:*

1. Apply core concepts in biology, including evolution, at the molecular, cellular and ecological levels.

2. Apply the scientific method to questions in biology.

3. Perform major methods used to investigate biological phenomena, including methods used in the field to study biological populations, communities and ecological systems.

4. Evaluate scientific content within the primary literature.

5.  Present scientific hypotheses and data in the formats used by practicing scientists.

6. Describe the relationship of biological knowledge to society, primarily in the area of environmental sustainability.

# Biology Minor, with Education Concentration

## Requirements for Minor with Education Concentration

## Five Units in Biology, Including the Following:

### BIOL 195: Ecology, Evolution and Biodiversity

(1 Unit)
Focuses on whole organisms and their evolutionary and ecological relationships. Evolutionary processes, biological diversity, conservation biology and human impacts on ecology and biodiversity are major themes. Skills introduced are hypothesis testing, experimental design, use of primary literature in writing assignments and basic statistics. Lecture and laboratory. *Staff.*

### BIOL 210: Cell and Molecular Biology

(1 Unit)
Prerequisite: BIOL 195. Prerequisite or corequisite: CHEM 152.
Focuses on organisms at the cellular and molecular levels, including biological chemistry, bioenergetics and metabolism, Mendelian and molecular genetics, cellular communication and the molecular control of the cell cycle. Builds upon skills from BIOL 195 to expand abilities in hypothesis testing and experimental design to produce an individual research paper, and to carry out more advanced statistical analyses. Lecture and laboratory. *Staff.*

### BIOL 300: Genetics

(1 Unit)
Prerequisite: BIOL 195 , BIOL 210.

Mechanisms of inheritance and of gene structure and function in living organisms. Both classical and molecular genetics are considered as they relate to function. *Staff.*

## One of the Following:

### BIOL 216: Vascular Plants

(1 Unit)
Prerequisite: BIOL 195.
Morphology, taxonomy and distribution of vascular plants. Representatives of local flora receive special attention in laboratory and field studies. Lecture and laboratory. *Staff*

## One of the Following:

### BIOL 225: Invertebrate Zoology

(1 Unit)
Prerequisite: BIOL 195.
Field-oriented course emphasizing evolution, classification, ecology, behavior and natural history of invertebrate animals. Class involves field trips and use of the Whitehouse Nature Center. Lecture and laboratory. *Cahill.*

### BIOL 227: Vertebrate Zoology

(1 Unit)
Prerequisite: BIOL 195.
Classification, behavior, ecology and evolution of the vertebrates. Mammals and birds are emphasized more than other groups. Lecture and laboratory. *Hallinger*.

### BIOL 248: Ornithology

(1 Unit)
Prerequisite: BIOL 195.
The biology of birds with emphasis on evolution, behavior, ecology and conservation. Field experience in identification, population studies, bird banding, song recording and analysis, and carrying out a research project. Students will learn to critically evaluate the ornithological literature. Lecture and laboratory. *Hallinger*.

### BIOL 314: Comparative Anatomy

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
Comparative anatomical study of vertebrate organ systems, their development and evolution. Lecture and laboratory. *Hallinger*.

## Completion of Education Concentration

# Biology, B.A.

## Requirements for Major

## Eight Units in Biology, Including at Least Five Courses with Laboratory:

### BIOL 195: Ecology, Evolution and Biodiversity

(1 Unit)
Focuses on whole organisms and their evolutionary and ecological relationships. Evolutionary processes, biological diversity, conservation biology and human impacts on ecology and biodiversity are major themes. Skills introduced are hypothesis testing, experimental design, use of primary literature in writing assignments and basic statistics. Lecture and laboratory. *Staff.*

### BIOL 210: Cell and Molecular Biology

(1 Unit)
Prerequisite: BIOL 195. Prerequisite or corequisite: CHEM 152.
Focuses on organisms at the cellular and molecular levels, including biological chemistry, bioenergetics and metabolism, Mendelian and molecular genetics, cellular communication and the molecular control of the cell cycle. Builds upon skills from BIOL 195 to expand abilities in hypothesis testing and experimental design to produce an individual research paper, and to carry out more advanced statistical analyses. Lecture and laboratory. *Staff.*

### BIOL 300: Genetics

(1 Unit)
Prerequisite: BIOL 195 , BIOL 210.
Mechanisms of inheritance and of gene structure and function in living organisms. Both classical and molecular genetics are considered as they relate to function. *Staff.*

## At Least One Course from Each of the Following Two Lists:

### List I: Field Course with Lab

### BIOL 216: Vascular Plants

(1 Unit)
Prerequisite: BIOL 195.
Morphology, taxonomy and distribution of vascular plants. Representatives of local flora receive special attention in laboratory and field studies. Lecture and laboratory. *Staff*

### BIOL 225: Invertebrate Zoology

(1 Unit)
Prerequisite: BIOL 195.
Field-oriented course emphasizing evolution, classification, ecology, behavior and natural history of invertebrate animals. Class involves field trips and use of the Whitehouse Nature Center. Lecture and laboratory. *Cahill.*

### BIOL 227: Vertebrate Zoology

(1 Unit)
Prerequisite: BIOL 195.

Classification, behavior, ecology and evolution of the vertebrates. Mammals and birds are emphasized more than other groups. Lecture and laboratory. *Hallinger*.

### BIOL 237: Ecology

(1 Unit)
Prerequisite: BIOL 195.
A study of interactions between organisms and their environment including adaptation, competition, parasitism, population and community dynamics and the ecosystem concept. Class involves field trips and use of the Whitehouse Nature Center. Lecture and laboratory. *Lyons-Sobaski.*

### BIOL 248: Ornithology

(1 Unit)
Prerequisite: BIOL 195.
The biology of birds with emphasis on evolution, behavior, ecology and conservation. Field experience in identification, population studies, bird banding, song recording and analysis, and carrying out a research project. Students will learn to critically evaluate the ornithological literature. Lecture and laboratory. *Hallinger.*

## List II: Cell and Molecular Course with Lab

### BIOL 301: Cell Biology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
An in-depth investigation of biological systems at the cellular, subcellular and molecular levels. Studies of a variety of cell types and energy relations within cells. Lecture emphasizes metabolism, metabolic regulation and cellular diversity. Laboratory emphasizes measurement and analysis of subcellular features. *Cervantes.*

### BIOL 312: Genetics Laboratory

(1/2 Unit)
Prerequisite: BIOL 300 Genetics Project-based laboratory course that will introduce students to general techniques in genetics.
Under faculty guidance, students will design and carry out their own experiments, read primary literature, and present results in written and oral format. *Staff.*

### BIOL 324: Developmental Biology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
The genetic, molecular and cellular mechanisms underlying early development of multicellular organisms. Potential topics include fertilization and early development, gene regulation during development, neural pathfinding, cell signaling, cell division and growth, organogenesis, limb development, metamorphosis, regeneration, sex determination, the evolution of development, genomics, and stem cell research. Lecture and laboratory. *Albertson.*

### BIOL 332: Microbiology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor; CHEM 154 recommended.

Introduction to the microbial world. Explores the morphology, physiology, genetics and diversity of microorganisms. Stresses the relationships among microbes and other organisms, including humans. Lecture and laboratory. *Olapade.*

### BIOL 362: Molecular Biology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor; CHEM 154 recommended.
The theory and practice of modern molecular genetics will be explored. Techniques potentially considered include: DNA cloning, DNA hybridization, the polymerase chain reaction, DNA sequencing, and the expression of cloned genes in bacteria. Lecture/discussion and laboratory. Offered in alternate years. *Saville.*

## Additional Requirements

- The remaining units needed for graduation can come from the above courses or from any other Biology course.
- Students should select other courses for the major in consultation with Biology faculty members. Students planning to go to graduate school in biological fields are strongly encouraged to take more than the minimum 8 units for the major.
- MATH 120 **OR** MATH 141 **OR** MATH 209, or their equivalent, is required unless a substitution is approved by the department chair.
- Two units of chemistry unless a substitution is approved in advance by the staff. The biology faculty strongly recommends that CHEM 152 and CHEm 154 be taken to satisfy this requirement. CHEM 101, CHEM 107 and CHEM 200 do not fulfill this requirement.
- Further study in chemistry, physics, geology and mathematics is recommended and encouraged.
- All biology courses and cognate courses must be taken for a numerical grade, except those offered only on a credit/no credit basis.
- No more than one unit of internship credit (BIOL 391, BIOL 392) can count toward the major. No more than one unit of seminar (BIOL 401, BIOL 402) and no more than one unit of directed study (BIOL 411, BIOL 412) credit can count toward the major.
- Biology 190 (given only for AP credit) does not count toward the major.
- A senior examination must be taken for assessment purposes.
- It is expected that six of the eight units in biology be taken at Albion College. Other arrangements will be made for bona fide transfer students and students in approved off-campus programs.

# Biology, with Education Concentration, B.A.

## Requirements for Major with Education Concentration

## Eight Units in Biology, Including the Following:

Of the latter two courses, one must be from List I. In addition, one unit in the major must be from List II. At least six of these courses must include a laboratory.

### BIOL 195: Ecology, Evolution and Biodiversity

(1 Unit)
Focuses on whole organisms and their evolutionary and ecological relationships. Evolutionary processes, biological diversity, conservation biology and human impacts on ecology and biodiversity are major themes. Skills introduced are

hypothesis testing, experimental design, use of primary literature in writing assignments and basic statistics. Lecture and laboratory. *Staff.*

### BIOL 210: Cell and Molecular Biology

(1 Unit)
Prerequisite: BIOL 195. Prerequisite or corequisite: CHEM 152.
Focuses on organisms at the cellular and molecular levels, including biological chemistry, bioenergetics and metabolism, Mendelian and molecular genetics, cellular communication and the molecular control of the cell cycle. Builds upon skills from BIOL 195 to expand abilities in hypothesis testing and experimental design to produce an individual research paper, and to carry out more advanced statistical analyses. Lecture and laboratory. *Staff.*

### BIOL 300: Genetics

(1 Unit)
Prerequisite: BIOL 195 , BIOL 210.
Mechanisms of inheritance and of gene structure and function in living organisms. Both classical and molecular genetics are considered as they relate to function. *Staff.*

- One unit (200-level or higher) "animal" course
- One unit (200-level or higher) "plant" course

## One Unit Chosen From the Following Laboratory Cognates:

### GEOL 101: Introductory Geology

(1 Unit)
A survey course designed for liberal arts students covering many aspects of physical geology, the study of active earth processes. Labs illustrate lecture materials and the techniques used by geologists. One field trip. Complements the material covered in GEOL 103; either course can serve as an introductory course in geology. *Staff.*

### GEOL 103: Introduction to Earth History

(1 Unit)
A survey course designed for liberal arts students and covering many aspects of historical geology, the study of evolving environments and life forms on earth. Labs utilize fossils, rock samples, maps and field trips to illustrate techniques used by historical geologists. Complements the material covered in GEOL 101; either course can serve as an introductory course in geology. *Staff.*

### PHYS 115: General Physics

(1 Unit)
Prerequisite: High school algebra. First-year students need permission of instructor.
First semester of an algebra-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Includes analytical, historical and philosophical aspects. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

## Additional Requirements

- Two units in chemistry unless a substitution is approved in advance by the staff. The biology faculty strongly recommends that CHEM 152 and CHEM 154 be taken to satisfy this requirement. CHEM 101, CHEM 107, and CHEM 200 do not fulfill this requirement.
- Completion of Education Concentration. Students will design their program of study in consultation with the biology faculty and must obtain written approval of the Biology Department chair, preferably no later than the beginning of the second semester of the junior year.

# Cell and Molecular Biology Minor

## Information on Minors

- The minor in cell and molecular biology and the minor in environmental biology are not open to biology majors.
- Students may not choose more than one minor in the Biology Department.
- All courses for a biology minor must be taken for a numerical grade, except those offered only on a credit/no credit basis.
- BIOL 190 (given only for AP credit) does not count toward any minor in biology.
- A senior examination must be taken for assessment purposes.

## Requirements for Minor in Cell and Molecular Biology

## Five Units in Biology, Including the Following:

### BIOL 195: Ecology, Evolution and Biodiversity

(1 Unit)
Focuses on whole organisms and their evolutionary and ecological relationships. Evolutionary processes, biological diversity, conservation biology and human impacts on ecology and biodiversity are major themes. Skills introduced are hypothesis testing, experimental design, use of primary literature in writing assignments and basic statistics. Lecture and laboratory. *Staff.*

### BIOL 210: Cell and Molecular Biology

(1 Unit)
Prerequisite: BIOL 195. Prerequisite or corequisite: CHEM 152.
Focuses on organisms at the cellular and molecular levels, including biological chemistry, bioenergetics and metabolism, Mendelian and molecular genetics, cellular communication and the molecular control of the cell cycle. Builds upon skills from BIOL 195 to expand abilities in hypothesis testing and experimental design to produce an individual research paper, and to carry out more advanced statistical analyses. Lecture and laboratory. *Staff.*

### BIOL 300: Genetics

(1 Unit)
Prerequisite: BIOL 195 , BIOL 210.
Mechanisms of inheritance and of gene structure and function in living organisms. Both classical and molecular genetics are considered as they relate to function. *Staff.*

## Any Two of the Following, of Which at Least One Must Include a Laboratory:

## BIOL 301: Cell Biology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
An in-depth investigation of biological systems at the cellular, subcellular and molecular levels. Studies of a variety of cell types and energy relations within cells. Lecture emphasizes metabolism, metabolic regulation and cellular diversity. Laboratory emphasizes measurement and analysis of subcellular features. *Cervantes.*

## BIOL 324: Developmental Biology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
The genetic, molecular and cellular mechanisms underlying early development of multicellular organisms. Potential topics include fertilization and early development, gene regulation during development, neural pathfinding, cell signaling, cell division and growth, organogenesis, limb development, metamorphosis, regeneration, sex determination, the evolution of development, genomics, and stem cell research. Lecture and laboratory. *Albertson.*

## BIOL 332: Microbiology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor; CHEM 154 recommended.
Introduction to the microbial world. Explores the morphology, physiology, genetics and diversity of microorganisms. Stresses the relationships among microbes and other organisms, including humans. Lecture and laboratory. *Olapade.*

## BIOL 337: Biochemistry

(1 Unit)
Prerequisites: CHEM 212
Must be taken as Biology 337 for credit toward the major. Lecture. Same as CHEM 337. *Staff.*

## BIOL 341: Physiology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor; CHEM 154 recommended.
A study of the function of living organisms. Each physiological system is examined at the molecular, cellular, and tissue level. Particular focus is given to how each system is regulated and the interplay between systems. Lecture and laboratory. *Rabquer.*

## BIOL 362: Molecular Biology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor; CHEM 154 recommended.
The theory and practice of modern molecular genetics will be explored. Techniques potentially considered include: DNA cloning, DNA hybridization, the polymerase chain reaction, DNA sequencing, and the expression of cloned genes in bacteria. Lecture/discussion and laboratory. Offered in alternate years. *Saville.*

## BIOL 365: Environmental Microbiology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.

Microbes in action: bioremediation, biodegradation, cycling of nutrients and energy flow, biopesticides and phytopathogens, spread of antibiotic resistance, molecular ecology of infectious diseases, microbial symbionts and extremophiles. Explores these and other topics through discussions, field trips and experimental work. Lecture and laboratory. Offered in alternate years. *Olapade.*

### BIOL 367: Virology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
Are viruses living organisms or not? Addresses this and many more questions in molecular architecture, replication strategies, transmission modes, pathogenicity, carcinogenicity and usefulness of viruses. Lecture and discussion. Offered in alternate years. *Olapade.*

### BIOL 372: Immunology

(1 Unit)
Prerequisites: BIOL 300 or permission of instructor.
A study of the immune system. Explores innate, humoral, and cellular immune responses, and the application of immunity in health and disease through the study of scientific literature, student presentations, and project-based learning. Lecture. *Rabquer.*

# Environmental Biology Minor

## Information on Minors

- The minor in cell and molecular biology and the minor in environmental biology are not open to biology majors.
- Students may not choose more than one minor in the Biology Department.
- All courses for a biology minor must be taken for a numerical grade, except those offered only on a credit/no credit basis.
- BIOL 190 (given only for AP credit) does not count toward any minor in biology.
- A senior examination must be taken for assessment purposes.

## Requirements for Minor in Environmental Biology

## Five Units in Biology, Including the Following:

### BIOL 195: Ecology, Evolution and Biodiversity

(1 Unit)
Focuses on whole organisms and their evolutionary and ecological relationships. Evolutionary processes, biological diversity, conservation biology and human impacts on ecology and biodiversity are major themes. Skills introduced are hypothesis testing, experimental design, use of primary literature in writing assignments and basic statistics. Lecture and laboratory. *Staff.*

## Four of the Following, Including:

## At Least Two From:

## BIOL 216: Vascular Plants

(1 Unit)
Prerequisite: BIOL 195.
Morphology, taxonomy and distribution of vascular plants. Representatives of local flora receive special attention in laboratory and field studies. Lecture and laboratory. *Staff*

## BIOL 225: Invertebrate Zoology

(1 Unit)
Prerequisite: BIOL 195.
Field-oriented course emphasizing evolution, classification, ecology, behavior and natural history of invertebrate animals. Class involves field trips and use of the Whitehouse Nature Center. Lecture and laboratory. *Cahill.*

## BIOL 227: Vertebrate Zoology

(1 Unit)
Prerequisite: BIOL 195.
Classification, behavior, ecology and evolution of the vertebrates. Mammals and birds are emphasized more than other groups. Lecture and laboratory. *Hallinger*.

## BIOL 248: Ornithology

(1 Unit)
Prerequisite: BIOL 195.
The biology of birds with emphasis on evolution, behavior, ecology and conservation. Field experience in identification, population studies, bird banding, song recording and analysis, and carrying out a research project. Students will learn to critically evaluate the ornithological literature. Lecture and laboratory. *Hallinger*.

At Least One From:

## BIOL 210: Cell and Molecular Biology

(1 Unit)
Prerequisite: BIOL 195. Prerequisite or corequisite: CHEM 152.
Focuses on organisms at the cellular and molecular levels, including biological chemistry, bioenergetics and metabolism, Mendelian and molecular genetics, cellular communication and the molecular control of the cell cycle. Builds upon skills from BIOL 195 to expand abilities in hypothesis testing and experimental design to produce an individual research paper, and to carry out more advanced statistical analyses. Lecture and laboratory. *Staff.*

## BIOL 237: Ecology

(1 Unit)
Prerequisite: BIOL 195.
A study of interactions between organisms and their environment including adaptation, competition, parasitism, population and community dynamics and the ecosystem concept. Class involves field trips and use of the Whitehouse Nature Center. Lecture and laboratory. *Lyons-Sobaski.*

## BIOL 240: Conservation Biology

(1 Unit)
Prerequisite: BIOL 195.
Presents concepts and issues concerning the causes and consequences of the loss of biodiversity. Emphasizes the science of conservation biology including the evolutionary potential of populations and species, as well as the history of the field, international efforts to conserve species, and the current status of policies such as the U.S. Endangered Species Act. Includes a conservation-related outreach project. *Lyons-Sobaski.*

### BIOL 365: Environmental Microbiology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
Microbes in action: bioremediation, biodegradation, cycling of nutrients and energy flow, biopesticides and phytopathogens, spread of antibiotic resistance, molecular ecology of infectious diseases, microbial symbionts and extremophiles. Explores these and other topics through discussions, field trips and experimental work. Lecture and laboratory. Offered in alternate years. *Olapade.*

### BIOL 368: Behavioral Ecology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
Patterns and functions of behavior examined from an ecological-evolutionary perspective. Topics include history of animal behavior, behavioral genetics, habitat selection, foraging, antipredator behavior, cooperation and altruism, communication, sexual selection, mating systems, parental behavior and optimality models. Independent field studies of living animals. Lecture and laboratory. Offered in alternate years. *Staff.*

(BIOL 365 and BIOL 368 require the following or permission of the instructor as prerequisite)

### BIOL 300: Genetics

(1 Unit)
Prerequisite: BIOL 195 , BIOL 210.
Mechanisms of inheritance and of gene structure and function in living organisms. Both classical and molecular genetics are considered as they relate to function. *Staff.*

# Carl A. Gerstacker Institute for Business and Management

# Staff

**Laurel Draudt**, director, Carl A. Gerstacker Institute for Business and Management.
B.A., Marietta College; M.A., The Ohio State University.

# Introduction

The Carl A. Gerstacker Institute for Business and Management encourages students to explore the practical and dynamic subject of business from many perspectives. The Institute offers a concentration with two sets of requirements: one for students pursuing majors from the Economics and Management department and the other for students pursuing any other major. This concentration recognizes that students with different majors begin with

different backgrounds in the fundamentals of management. The course work is enhanced by developing critical thinking and leadership skills through other opportunities such as Gerstacker Institute speakers, networking with business executives and participation in the first-year workshop, sophomore summer, internships and the senior capstone experience. Required internships, available in diverse work settings, allow students to experience various career paths and to put their education into practice.

Students must be admitted to the Gerstacker Institute to pursue this concentration. Visit the Gerstacker Institute website for information on the application process.

# Student Learning Outcomes

# Management for the Professions Concentration

## Requirements for Students With Majors From the Economics and Management Department (7.25 Units)

### BUS 111: Gerstacker Leadership Workshop

(1/4 Unit)
Explores issues faced by a wide variety of professions—from medicine to professional sports. Considers common models of strategic thinking and theory. Includes professional writing exercises and the use of Excel as an analytical tool. Students complete a final project showcasing the application of the theories and common business themes presented in the course. Required for all students who wish to pursue a business and organizations major or minor.

### E&M 357: Business Functions

(1 Unit)
Prerequisite: Permission of instructor.
Selected topics in management, finance and marketing for students in the Management for the Professions Concentration. The course highlights fundamental concepts with particular attention to their interactions within the context of the management of an organization. *Bedient.*

### COMM 242: Professional Communication

(1 Unit)
Prerequisite: For students in the Carl A. Gerstacker Institute for Business and Management, or permission of instructor.
Focuses on individual communication skills that enhance professional and career development, including skills needed in the business world. Develops writing skills, presentation skills, and the ability to communicate and work with others. *Erlandson, Staff.*

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

**OR**

### MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

## One Unit Each From the Ethics and International Lists

## Ethics List

### PHIL 301: Environmental Ethics

(1 Unit)
Examines theoretical and practical perspectives on ethical issues in relation to the environment. The theoretical issues range from whether we should assign moral value to species other than the human (and if so, on the basis of what criteria) to whether we have moral obligations to preserve the environment for future generations (and if so, what this would imply for the present generations). The practical issues range from creating incentives for restricting population growth without abdicating responsibilities toward the world's hungry, to the issue of what short-and long-term policies and practices need to be adopted to deal effectively with reducing pollution and hazardous waste while working toward a recycling, sustainable global society. *Madhok.*

### PHIL 302: Leadership Ethics

(1 Unit)
Examines the ethical foundations of leadership. Involves an in-depth discussion of foremost leadership theories and their applications to different contexts; critically examines the morally distinct aspects of leadership by looking at the relationships among power, self-interest, and morality; and analyzes leadership from within the ethical frameworks of virtue, duty, and utility along with discussing the ethical challenges of diversity (culture relativism, race, and gender) to traditional leadership ethics. *Madhok.*

### PHIL 303: Business Ethics

(1 Unit)
An examination of selected moral problems posed by corporate conduct—e.g., profit-maximization vs. social responsibility, corporate crime and the criminal justice system, business vs. environmental concerns, preferential hiring vs. reverse discrimination, employee autonomy vs. corporate loyalty, deception vs. honesty in advertising, corporate vs. government regulation. Clarification and critical examination of different ethical perspectives for resolving these moral dilemmas. *Madhok.*

### PHIL 304: Ethics and Public Policy

(1 Unit)
Emphasizes the ethical foundations of public policy. Rights, obligations, justice, autonomy, the nature of the good life: should these play a role in determining public policy, and if so, how? Focuses on the interaction between ethical values and public policy in areas such as health care, law, government, foreign policy, citizenship, education and media. *Madhok.*

### PHIL 306: Neuroscience and Ethics

(1 Unit)
An introduction to the dialogue that has developed between cognitive neuroscientists and moral philosophers. Cognitive neuroscience brings to the study of ethics an interest in the way the brain processes information and in the kinds of brain states that subserve thought and action—in short, it is answering the question of what kind of information-processing creatures we are. *Madhok.*

### PHIL 308: Biomedical Ethics

(1 Unit)
The application of major ethical theories to some of the moral problems raised by recent developments in medical technology. Does increased medical knowledge (the end) justify experimentation with human subjects (the means)? How much should a patient be told and who decides? Do parents have the right to give birth to a defective infant and thereby apparently pollute the gene pool? To whom is the genetic counselor responsible—fetus, parent, future generations? Is there a right to die? Who should be the ultimate decision-maker—physician, patient, pastor? Is health care a right or a privilege? In answering these dilemmas, are there any moral rules to follow or does each person decide what is best in the situation? *Madhok.*

### PHIL 309: International Ethics and Global Development

(1 Unit)
Explores the ethics of development in an international context. What should development be? Who should play a role in bringing about development? Examines multiple answers to these questions via an understanding of global development ethical theories and approaches such as the basic human needs approach, the human rights approach, the theory of development as freedom, the capabilities approach, theories of justice, as well as utilitarianism and deontological approaches. Applies these development ethics frameworks to important international issues such as poverty, gender inequality, violence and insecurity, over-consumption and globalization. *Madhok.*

## International List

### MLAC 305: Intercultural Understanding and Global Issues

(1 Unit)
Explores theoretical models of how cultures are derived and what it means to interact across cultural boundaries. Applies these theoretical models to selected global issues in order to demonstrate the potentialities and hazards of negotiation of global issues across borders. Useful for pre-professional students who want to attain the skills and knowledge to effectively function in an international/intercultural context. Taught in English. *Myers*

### E&M 362: International Management

(1 Unit)
Prerequisite: Junior or senior standing.
Cross-cultural, ethical and social issues related to doing business abroad. Corporate strategy and structure, communication, negotiation, human resources and marketing in multinational operations. Not offered every year. *Baker*.

- A foreign language course at the 200-level

## An Appropriate One-Unit Internship or Study Abroad Program

## A One-Unit Capstone Experience

(e.g. a business-related thesis, or another comparable experience approved by the Institute Director)

## Note

### E&M 357: Business Functions

(1 Unit)
Prerequisite: Permission of instructor.
Selected topics in management, finance and marketing for students in the Management for the Professions Concentration. The course highlights fundamental concepts with particular attention to their interactions within the context of the management of an organization. *Bedient.*

### COMM 242: Professional Communication

(1 Unit)
Prerequisite: For students in the Carl A. Gerstacker Institute for Business and Management, or permission of instructor.
Focuses on individual communication skills that enhance professional and career development, including skills needed in the business world. Develops writing skills, presentation skills, and the ability to communicate and work with others. *Erlandson, Staff.*

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

are taken during summer school between the second and third years.

# Requirements for Students With Majors From Departments Other Than Economics and Management (7.25 Units)

### BUS 111: Gerstacker Leadership Workshop

(1/4 Unit)
Explores issues faced by a wide variety of professions—from medicine to professional sports. Considers common models of strategic thinking and theory. Includes professional writing exercises and the use of Excel as an analytical tool. Students complete a final project showcasing the application of the theories and common business themes presented in the course. Required for all students who wish to pursue a business and organizations major or minor.

### E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of

prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

### E&M 211: Financial Accounting

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the world of business and accounting. Emphasis on understanding the concepts of net income, cash flow and financial condition. Communication of economic results through financial statements and reports. Development of analytical skills used in evaluating business success. Not open to first-year students. *Bedient, Carlson.*

### E&M 357: Business Functions

(1 Unit)
Prerequisite: Permission of instructor.
Selected topics in management, finance and marketing for students in the Management for the Professions Concentration. The course highlights fundamental concepts with particular attention to their interactions within the context of the management of an organization. *Bedient.*

### COMM 242: Professional Communication

(1 Unit)
Prerequisite: For students in the Carl A. Gerstacker Institute for Business and Management, or permission of instructor.
Focuses on individual communication skills that enhance professional and career development, including skills needed in the business world. Develops writing skills, presentation skills, and the ability to communicate and work with others. *Erlandson, Staff.*

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

## An Appropriate One-Unit Internship or Study Abroad Program

## A One-Unit Capstone Experience

(e.g., a business-related thesis, or another comparable experience approved by the Institute Director)

## Note

### E&M 357: Business Functions

(1 Unit)
Prerequisite: Permission of instructor.

Selected topics in management, finance and marketing for students in the Management for the Professions Concentration. The course highlights fundamental concepts with particular attention to their interactions within the context of the management of an organization. *Bedient.*

### COMM 242: Professional Communication

(1 Unit)
Prerequisite: For students in the Carl A. Gerstacker Institute for Business and Management, or permission of instructor. Focuses on individual communication skills that enhance professional and career development, including skills needed in the business world. Develops writing skills, presentation skills, and the ability to communicate and work with others. *Erlandson, Staff.*

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

are taken during summer school.

## Students in This Concentration Are Urged to Complete Their Global Category Requirement In:

### MLAC 305: Intercultural Understanding and Global Issues

(1 Unit)
Explores theoretical models of how cultures are derived and what it means to interact across cultural boundaries. Applies these theoretical models to selected global issues in order to demonstrate the potentialities and hazards of negotiation of global issues across borders. Useful for pre-professional students who want to attain the skills and knowledge to effectively function in an international/intercultural context. Taught in English. *Myers*

### E&M 362: International Management

(1 Unit)
Prerequisite: Junior or senior standing.
Cross-cultural, ethical and social issues related to doing business abroad. Corporate strategy and structure, communication, negotiation, human resources and marketing in multinational operations. Not offered every year. *Baker.*

**OR**

- A foreign language at the 200-level or above

# Center for Sustainability and the Environment

# Faculty

**Douglas W. White,** director, Center for Sustainability and the Environment; adjunct assistant professor of biology. B.S., Pennsylvania State University; M.S., University of Tennessee; Ph.D., Rutgers University.

# Introduction

The Center for Sustainability and the Environment (CSE), through its member students and affiliated faculty, encourages all Albion students to develop an awareness of the physical makeup of the biosphere and an appreciation of the vulnerability of the ecosystem. It further encourages students to explore environmental issues from multidisciplinary perspectives and to recognize that their actions have environmental consequences. Through dynamic interaction between environmental theory and practice, locally based but recognizing that the environment knows no boundaries, the Center enriches its immediate and extended communities.

**Admission—**Students must apply for admission to the Center and the majors and concentrations that it sponsors. Normally this step is taken as part of the application process to the College, and most members are admitted as incoming students. Admission to the Center is also available, by application, to all first- and second-year Albion students. Visit the Center's website for information on the application process.

# Policy on Advanced Placement Credit

Advanced Placement (AP) cannot be used to satisfy the requirements for BIOL 195. Students who place out of CHEM 152 are required to take CHEM 123 . Students with AP credit for MATH 141 are required to take MATH 143 or MATH 210.

# Majors and Concentrations

There are three majors and two concentrations offered by the Center for Sustainability and the Environment. Majors may be completed in environmental science, environmental studies, and sustainability studies. Concentrations are offered in environmental sciences and environmental studies.

# Student Learning Outcomes

1. Students recognize the complicated ways in which humans are fundamentally interconnected with natural systems.

2. Students understand how human population, resource use, and technology have impaired environmental sustainability at local, regional, and global scales.

3. Students can analyze how their personal actions and prospects relate to environmental sustainability and how different stakeholders will view environmental issues differently.

4. Students can evaluate how complex environmental problems may require changes in scientific understanding, technology, public policy, social relations, worldviews, or fundamental values.

5. Students can construct an integrated picture of a variety of environmental issues by drawing connections between courses in several disciplines and hands-on experiences.

6. Students can appraise various environmental career opportunities available in the private sphere, industry, education, non-governmental organizations, and government agencies.

## Sustainability Studies, B.A.

# Requirements for Major in Sustainability Studies

The major in sustainability studies at Albion College is an interdisciplinary, international program that is grounded in the social sciences and designed for students who are engaged in today's and tomorrow's sustainability challenges. Students develop an understanding of human prosperity, social justice, and ecological integrity as essential elements in a sustainable world. Students explore the relationships among the economy, lifestyle, politics and policy, the physical environment, natural resource use, climate change and biodiversity preservation. A required international experience stresses the global dimensions of sustainability and introduces other nations' approaches to sustainability. Students prepare for careers as sustainability professionals in corporate and civic settings, policy advocates, and educators.

The requirements for the major in sustainability studies are as follows:

## Nine and One-quarter to Ten Units of Courses Including:

### ENVN 101: Fundamentals of Environmental Studies

(1 Unit)
A theoretical and practical introduction to the interdisciplinary field of environmental studies. Cultivates both a broad understanding of ecological principles and the creative capacity to imagine and enact individual and social change that takes those principles into account. *Christiansen, White.*

### ENVN 102: Introduction to the Environment

(1 Unit)
Explores the interconnected web of earth's natural systems including the atmosphere, biological communities, oceans and continents, as well as humankind's interactions with and dependence on them. Major topics include global climate and problems of global warming and desertification; resources and problems of world hunger and population growth; and pollution and problems of ecosystem destruction. *Staff.*

### ENVN 220: Economics, Politics, and Environmental Policy

(1 Unit)
Examines decisions affecting environmental quality made by government, businesses and individuals; economic analysis relevant to such decisions; the policy-making process; and dispute resolution techniques that may be useful in conflicts over environmental issues. Focuses on current national and local environmental policies, with comparisons to practices in other countries. *Saltzman.*

## One of the Following:

### ANTH 271: Nature and Society: An Introduction to Ecological Anthropology

(1 Unit)
Prerequisite: ANTH 105 or SOC 101 or permission of instructor.
Provides an understanding of the diverse and ever-changing relationships between people and their natural environments. Considers the historical foundations of ecological anthropology and the human dimensions of contemporary environmental issues ranging from deforestation and desertification to ecotourism and environmental justice. Through cross-cultural case studies, students learn how human perceptions of and interactions with the environment are conditioned by social variables like gender, race, politics, economics and religion/worldview. *Harnish.*

### ANTH 357: Violent Environments

(1 Unit)
Prerequisite: ANTH 105 or SOC 101 and junior standing or permission of instructor.
Does environmental degradation produce violence? What is the relationship between population growth, resource scarcity and violent conflict? In what ways do different environments (e.g., African national parks, Appalachian coal mines, hurricane-ravaged coastal cities) feature differential access to and control over natural and economic resources? This course first explores anthropological perspectives on violence, including biological, archaeological and cultural approaches to understanding war. Then, it investigates the multifaceted linkages between environments and conflict—the articulations among resource extraction, urbanization, economic development, population growth, biotechnology, biodiversity, natural disasters, human health, structural violence and social inequality. *Harnish.*

**OR**

### PLSC 237: Controversies in Global Politics

(1 Unit)
How do we achieve justice beyond borders in an increasingly complex and interdependent world? By examining different traditions of political, ethical, and legal thought, students acquire the tools necessary to make reasoned judgments about urgent political problems in international politics. These problems include but are not limited to: global poverty, human rights, immigration, global climate change, nuclear proliferation, terrorism, and sea-level rise. *Walling.*

## Two of the Following:

With at least one from the arts and humanities list, and both from different departments.

Arts and Humanities Courses

### ARTH 315: Earth, Art, and the Environment

(1 Unit)
Examines American (U.S.) and European art and architecture that interacts with the environment and calls attention to the benefits and consequences of human interaction with the environment in a national and global context. Focuses on art, architecture and design projects produced from 1960 to the present and materials that set the context for artistic concerns about the environment beginning in the nineteenth century. *Wickre.*

### ENGL 384: Idea of Nature, Nature of Ideas

(1 Unit)
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.
An interdisciplinary exploration of the relationship between the imagination and the natural world in the works of key American writers. Draws on the creative and critical tools of multiple disciplines—including literary studies, creative writing, and natural history. Typical authors include H.D. Thoreau, Annie Dillard, James Galvin, Bernd Heinrich, and Mary Oliver. *Christensen.*

### PHIL 301: Environmental Ethics

(1 Unit)
Examines theoretical and practical perspectives on ethical issues in relation to the environment. The theoretical issues range from whether we should assign moral value to species other than the human (and if so, on the basis of what criteria) to whether we have moral obligations to preserve the environment for future generations (and if so, what this would imply for the present generations). The practical issues range from creating incentives for restricting population

growth without abdicating responsibilities toward the world's hungry, to the issue of what short-and long-term policies and practices need to be adopted to deal effectively with reducing pollution and hazardous waste while working toward a recycling, sustainable global society. *Madhok.*

Social Science Courses

### PLSC 302: Public Policy, Interest Groups, and the American Welfare State

(1 Unit)
Prerequisites: Sophomore standing, PLSC 100 and PLSC 101.
This seminar analyzes the United States and the development of a robust middle-class welfare state: i.e., the "hidden" welfare state. While US centric, the seminar does not ignore a comparative analysis of other types of welfare states. The seminar analyzes key scholarship on contemporary state theory and American political development (APD) and engages broad questions about public policy, state formation, bureaucratic development, and the rise and fall of the New Deal/Administrative State (1932-1980). Emphasis will be on the fundamental role that interest group liberalism (IGL) has on the public policy arenas of: race relations, civil rights & civil liberties, healthcare, education, urban affairs, rural politics, and the way that IGL has configured law, legislation, and liberal democratic structures in the USA are the primary areas for analysis. The seminar will provide an opportunity for students that wish to in a purposely cross-disciplinary approach: an approach that draws heavily on scholarship in politics, history, and political sociology. *Staff*

### HIST 337: Environmental History

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Focus on the historical roots of contemporary environmental problems. Analysis of both the destructive and the conservation sides of the American experience. Native American perspectives, women and nature, technology, Thoreau, John Muir, energy crisis, ecology as the subversive science, a land ethic, Rachel Carson's Silent Spring, and environmental impacts (DDT, Love Canal, atomic testing, PBB, dioxin, acid rain) are stressed. Concentration on America, but within a global frame of reference. Interdisciplinary emphasis that invites students from a variety of majors, particularly those in the sciences and those treating public policy issues. Special opportunities for those who enjoy the out-of-doors. *Staff*

### COMM 311: Environmental Communication

(1 Unit)
Prerequisite: COMM 101
A study of how the natural environment is socially constructed through its representation in word and image. After introducing students to fundamental environmental terminology, the course will consider a number of key environmental communicators, their ideological positions, and how they shape their messages. This will be followed by a discussion of audiences and environmental communication ethics. Offered occasionally. *Staff.*

## Note

In some cases, courses may require prerequisites, class standing or permission of the instructor. Please discuss these options with your adviser.

- PBSV 289: Innovative and Sustainable Cities
- Study abroad in an approved program, with a minimum of three courses summing to a minimum of 2.25 units approved in advance. A list of programs and approved courses is available from the director of the Center for Sustainability and the Environment.

## Two Cognate Courses Including:

### GEOL 111: Geography and Geographic Information Systems

(1 Unit)
An introduction to the elementary principles, techniques and utility of geographic information systems (GIS) toward the study of world geography, as well as related concepts and techniques involved in creating and using digital maps. Shows how maps (particularly computer-generated maps) can help in displaying and analyzing geographic and other spatial data, and the use of these analyses in modeling cultural and natural systems. Some prior computer experience is helpful, but is not required. Lecture and laboratory. *McRivette.*

## One of the Following:

### ANTH 240: Ancient Civilizations

(1 Unit)
Prerequisite: ANTH 105 or permission of instructor.
Although the human species has been on the planet in its present form for at least 100,000 years, complexly organized societies with cities, governments and organized religions did not emerge until the last 5,000. This phenomenon took place independently throughout the globe, and while some ancient civilizations collapsed, others became the foundations upon which the modern world was constructed. Why is this so? Through a comparative analysis of Mesopotamian, Egyptian, Indus, Maya, Aztec and Incan societies, among others, students will learn to analyze the factors that have led to the emergence and transformation of civilizations. *Chase.*

### BIOL 240: Conservation Biology

(1 Unit)
Prerequisite: BIOL 195.
Presents concepts and issues concerning the causes and consequences of the loss of biodiversity. Emphasizes the science of conservation biology including the evolutionary potential of populations and species, as well as the history of the field, international efforts to conserve species, and the current status of policies such as the U.S. Endangered Species Act. Includes a conservation-related outreach project. *Lyons-Sobaski.*

### GEOL 104: Earth Resources and the Environment

(1 Unit)
Without earth resources, civilization would not exist. Gold, diamonds, water, oil, building materials—all of our material resources ultimately are derived from the earth. This course examines the origin and geologic occurrence of these materials and the environmental implications of their utilization. No laboratory. *Staff.*

### GEOL 106: Natural Disasters

(1 Unit)
A review of the natural disasters that affect humans and the environment. Emphasizes the causes and prediction of natural hazards, assessment of hazard vulnerability, and disaster mitigation and recovery through case studies of historical and recent natural disasters. Topics include earthquakes, volcanoes, landslides, extreme weather, climate change and floods. No laboratory. *Staff.*

### GEOL 115: Oceans, Atmosphere and Climate

(1 Unit)
Describes the world's oceans and atmosphere and considers how they interact with one another, and with humans. Topics include the geological evolution of the ocean basins, ocean-atmosphere circulation patterns, ocean currents, climate and weather patterns, storms and weather fronts, paleo-oceanography and the history of climate, and the chemical composition of the oceans. Emphasizes the role of the oceans in mediating global climate, global change, global dispersal of pollution and other environmental concerns. No laboratory. Offered in alternate years. *T. Lincoln, Wilch.*

### PHYS 102: The Physics of Urban and Environmental Problems

(1 Unit)
Prerequisite: High school algebra.
The physics of modern urban and environmental problems with respect to their causes, effects and possible cures. Topics include transportation, energy generation and transmission, pollution and resources. Not intended for science majors. Offered in alternate years. *Zellner.*

## Experiential Requirement Including:

## Select From:

- Participation in the bi-weekly Center for Sustainability and the Environment Seminar unless excused because of a conflicting obligation.
- Selection from one approved opportunity for experiential learning (up to one-half unit). This can include one of the following:
- Honors Program or departmental honors thesis
- FURSCA

### ENVN 201: Ecology and Environmental Field Trip

(1/2 Unit)
Prerequisites: Membership in the Center for Sustainability of the Environment and permission of the instructor. Demonstrates, in seminars and a one-two week field trip to a selected region of the United States, how ecosystems have been shaped by the interplay of biological, geological and human history and are thus both adapted to, and susceptible to changes in, modern landscape, climate and human practices. Examines environmental issues of both local and national significance related to these ecosystems. *Staff.*

**OR**

### ENVN 206: Sustainable Living Seminar

(1/2 Unit)
Residents of the College's E-house and other students explore, through practice, the relationship between their daily actions and the earth's ecosystems. Several models of sustainability are discussed, and students are asked to articulate the view they believe appropriate for their own lives. Students cooperatively develop a significant improvement in the house or its grounds and monitor the environmental footprint of their actions. Note that residence in the E-House is not available in 2015-16. *Staff.*

- An approved internship or summer work experience

# Chemistry & Biochemistry

# Faculty

**Kevin M. Metz**, professor and chair.
B.S., Alma College; Ph.D., University of Wisconsin—Madison. Appointed 2008.

**Craig R. Bieler**, professor.
B.S., Juniata College; Ph.D., University of Pittsburgh. Appointed 1995.

**Clifford E. Harris**, professor.
B.S., California State University, Chico; Ph.D., University of California, Santa Cruz. Appointed 1997.

**Lisa B. Lewis**, professor.
B.S., King's College; M.S., University of Pittsburgh; Ph.D., 1994, University of California, Irvine. Appointed 1995.

**Vanessa P. McCaffrey**, professor.
B.S., McNeese State University; Ph.D., University of North Carolina, Chapel Hill. Appointed 2003.

**Christopher E. Rohlman**, professor.
B.S., Oakland University; Ph.D., University of Michigan. Appointed 2001.

**Craig N. Streu**, associate professor.
B.A., Albion College; Ph.D., University of Pennsylvania. Appointed 2015.

# Introduction

The Chemistry Department has three major objectives: (1) To provide a strong major within a liberal arts framework for those entering the profession of chemistry, biochemistry, or preparing for graduate work; (2) to provide cognate backgrounds in chemistry for biology majors, Premedical and pre-dental students, medical technologists, dieticians, science educators and others who may require chemistry; (3) to provide non-science majors with sufficient background to understand advances in technology, environmental implications of new laws, drug problems and health advances.

Independent study is encouraged both as a part of formal course work and in undergraduate research projects. Faculty work closely with students in research areas of mutual interest. Cooperation with other science departments provides opportunities for interdepartmental studies. Majors are strongly encouraged to balance their science training with courses in the arts and humanities.

Chemistry Department Website

# Majors and Minors

The Chemistry Department offers majors and minors in both chemistry and biochemistry. Both majors require a minimum of ten units in chemistry, plus appropriate cognate courses. Either major is appropriate for students interested in advanced study in chemistry or biochemistry or for careers in other fields such as medicine and health sciences, law, business or education. Consult a member of the Chemistry Department for suggestions of appropriate courses for graduate school preparation.

In either major, the timing of the course sequence is crucial, and students should consult with a member of the Chemistry Department as early as possible in the planning of their major.

# Career Opportunities

In addition to professional work and graduate study in chemistry or biochemistry, a major can establish a foundation for future careers in a number of fields: e.g., engineering, medicine and other health-related fields, law and technically related businesses. Graduate and professional schools in the medical sciences require a strong background in chemistry.

# Student Learning Outcomes

These Student Learning Outcomes will be used to satisfy the requirements of the Higher Learning Commission for the **Chemistry Major.**

1. Process Skills-

Students will be able to solve chemical problems.

2. Experimental Competency-

Students will be able to design experiments.

3. Literature and Informatics-

Students will be able to evaluate primary literature.

4. Communication Skills-

Students will be able to communicate effectively.

5. Content Knowledge-

Students will be able to demonstrate fluency in basic chemistry content knowledge.

These Student Learning Outcomes will be used to satisfy the requirements of the Higher Learning Commission for the **ACS-certified Chemistry Major**.

1. Process Skills-

Students will be able to solve chemical problems.

2. Experimental Competency-

Students will be able to design experiments.

3. Literature and Informatics-

Students will be able to evaluate primary literature.

4. Communication Skills-

Students will be able to communicate effectively.

5. Content Knowledge-

Students will be able to demonstrate fluency in basic chemistry content knowledge.

6. Laboratory Experience

Students will complete at least 400 hours of laboratory work beyond general chemistry course work.

These Student Learning Outcomes will be used to satisfy the requirements of the Higher Learning Commission for the **Chemistry Major with Secondary Education Certificate**.

1. Process Skills-

Students will be able to solve chemical problems.

2. Experimental Competency-

Students will be able to design experiments.

3. Literature and Informatics-

Students will be able to evaluate primary literature.

4. Communication Skills-

Students will be able to communicate effectively.

5. Content Knowledge-

Students will be able to demonstrate fluency in basic chemistry content knowledge.

6. Teaching Certification-

Students will be able to complete requirements for eligibility for certification.

These Student Learning Outcomes will be used to satisfy the requirements of the Higher Learning Commission for the **Biochemistry Major**.

1. Process Skills-

Students will be able to solve biochemical problems.

2. Experimental Competency-

Students will be able to design experiments.

3. Literature and Informatics-

Students will be able to evaluate primary literature.

4. Communication Skills-

Students will be able to communicate effectively.

5. Content Knowledge-

Students will be able to demonstrate fluency in basic biochemistry content knowledge.

These Student Learning Outcomes will be used to satisfy the requirements of the Higher Learning Commission for the Biochemistry Major with Secondary Education Certificate.

1. Process Skills-

Students will be able to solve biochemical problems.

2. Experimental Competency-

Students will be able to design experiments.

3. Literature and Informatics-

Students will be able to evaluate primary literature.

4. Communication Skills-

Students will be able to communicate effectively.

5. Content Knowledge-

Students will be able to demonstrate fluency in basic biochemistry content knowledge.

6. Teaching Certification-

Students will be able to complete requirements for eligibility for certification.

These Student Learning Outcomes will be used to satisfy the requirements of the Higher Learning Commission for the Chemistry Minor.

1. Process Skills-

Students will be able to solve chemical problems.

2. Experimental Competency-

Students will be able to design experiments.

3. Content Knowledge-

Students will be able to demonstrate foundational chemistry content knowledge.

These Student Learning Outcomes will be used to satisfy the requirements of the Higher Learning Commission for the Chemistry Minor with Secondary Education Certificate.

1. Process Skills-

Students will be able to solve chemical problems.

2. Experimental Competency-

Students will be able to design experiments.

3. Content Knowledge-

Students will be able to demonstrate foundational chemistry content knowledge.

4. Teaching Certification-

Students will be able to complete requirements for eligibility for certification.

These Student Learning Outcomes will be used to satisfy the requirements of the Higher Learning Commission for the Biochemistry Minor.

1. Process Skills-

Students will be able to solve biochemical problems.

2. Experimental Competency-

Students will be able to design experiments.

3. Content Knowledge-

Students will be able to demonstrate foundational biochemistry content knowledge.

# Departmental Policy on Advanced Placement and International Baccalaureate Credit

1. Students with a 4 or 5 on the AP Chemistry exam will receive one unit of CHEM 100X.

2. Students with a 5 on the IB (HL) Chemistry exam will receive one unit of CHEM 100X.

3. Students wishing to accelerate their study of chemistry based on their AP or IB performance should contact a member of the Chemistry faculty to arrange to take a placement test.

# American Chemical Society-Certified Chemistry, B.A.

# Requirements for a Certified Major in American Chemical Society

The Chemistry Department is approved by the American Chemical Society (ACS). Course substitutions may be made only with prior approval of the Chemistry Department. In order to graduate as an ACS-certified chemistry major, students must take all of the courses in the chemistry major plus:

## CHEM 337: Biochemistry

(1 Unit)
Prerequisite: CHEM 212.
An in-depth study of biochemical structure, catalysis, metabolism and cellular regulation. Understanding living systems through molecular and chemical models. Areas of emphasis include macromolecular structure, enzyme mechanisms and kinetics, metabolic mechanisms and regulation, genomics, and proteomics. Same as BIOL 337. *Rohlman, Streu.*

## CHEM 350: Advanced Organic Chemistry

(1/2 Unit)
Prerequisites: CHEM 154, CHEM 212.
Reinforces and extends the concepts introduced in CHEM 154, CHEM 212 and introduces new concepts, reactions and molecular theories. Taught with one of two emphases: (1) the synthetic course extends understanding of organic reactions, introduces the most current synthetic organic methods and asks students to use their knowledge to propose syntheses of complex molecules; (2) the physical/mechanistic course includes topics such as aromaticity and models used to explain thermal and photochemical concerted reactions such as frontier orbital theory, Huckel-Mobius transition state theory and the conservation of orbital symmetry. Students in both courses are taught to read and understand the chemical literature, then write about and orally present the novel chemistry they have learned. *Harris, McCaffrey.*

## CHEM 353: Spectroscopy

(1/2 Unit)
Prerequisite: CHEM 340.
General principles and theories of light absorption and emission at the molecular level, including the application of symmetry and group theory. Detailed applications to IR, Raman, microwave, UV-visible and radiofrequency spectroscopy (NMR, EPR). Additional topics chosen from X-ray crystallography, mass spectroscopy, photochemistry and Mossbauer spectroscopy. *Bieler, Lewis, Metz.*

## MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### PHYS 167: Analytical Physics I

(1 Unit)
Corequisite: MATH 141, or permission of instructor.
First semester of a calculus-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

### PHYS 168: Analytical Physics II

(1 Unit)
Prerequisite: PHYS 167. Corequisite: MATH 143 or permission of instructor.
Second semester of a calculus-based survey of general physics. Topics include electricity and magnetism, light and optics, and select topics in modern physics. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

# Biochemistry Minor

## Requirements for Biochemistry Minor

- All courses for the minor must be taken for a numerical grade.

## Six Units in Chemistry:

### CHEM 152: Principles of Chemistry

(1 Unit)
Basic principles of stoichiometry, atomic and molecular structure, equilibrium, thermodynamics and kinetics. Thematic content will be used to explain how the foundational principles of chemistry can be used to explain the world around us. Topical applications and issues will vary with instructor. *Bieler, Harris, Lewis, McCaffrey, Metz, Rohlman, Streu.*

### CHEM 154: Organic Structure and Reactivity

(1 Unit)
Prerequisite: CHEM 152
This course builds on the atomic and molecular foundation developed in CHEM 152. Student are introduced to reactivity and mechanistic details of organic acid/base chemistry as well as model organic reactions. Quantitative reaction concepts necessary for organic chemistry are emphasized including: stoichiometry, thermochemistry, kinetic theory, thermodynamics, and dynamic equilibrium. Lecture and laboratory. *Harris, McCaffrey, Streu*

### CHEM 206: Chemical Analysis

(1 Unit)
Prerequisites: CHEM 152 or CHEM 154 .
Laboratory course emphasizing the collection, analysis and interpretation of quantitative data, using both traditional and instrumental techniques. *Bieler, Lewis, Metz.*

### CHEM 337: Biochemistry

(1 Unit)
Prerequisite: CHEM 212.
An in-depth study of biochemical structure, catalysis, metabolism and cellular regulation. Understanding living systems through molecular and chemical models. Areas of emphasis include macromolecular structure, enzyme mechanisms and kinetics, metabolic mechanisms and regulation, genomics, and proteomics. Same as BIOL 337. *Rohlman, Streu.*

AND

2 units with laboratory components at the 200- or 300-level. (For example, CHEM 212: Organic Reactions and Mechanisms, CHEM 214: Inorganic Chemistry, CHEM 321: Advanced Synthesis Laboratory, CHEM 323: Advanced Laboratory: Biochemsitry)

# Biochemistry, B.A.

## Common Core

### CHEM 152: Principles of Chemistry

(1 Unit)
Basic principles of stoichiometry, atomic and molecular structure, equilibrium, thermodynamics and kinetics. Thematic content will be used to explain how the foundational principles of chemistry can be used to explain the world around us. Topical applications and issues will vary with instructor. *Bieler, Harris, Lewis, McCaffrey, Metz, Rohlman, Streu.*

### CHEM 154: Organic Structure and Reactivity

(1 Unit)
Prerequisite: CHEM 152
This course builds on the atomic and molecular foundation developed in CHEM 152. Student are introduced to reactivity and mechanistic details of organic acid/base chemistry as well as model organic reactions. Quantitative reaction concepts necessary for organic chemistry are emphasized including: stoichiometry, thermochemistry, kinetic theory, thermodynamics, and dynamic equilibrium. Lecture and laboratory. *Harris, McCaffrey, Streu*

### CHEM 206: Chemical Analysis

(1 Unit)
Prerequisites: CHEM 152 or CHEM 154 .
Laboratory course emphasizing the collection, analysis and interpretation of quantitative data, using both traditional and instrumental techniques. *Bieler, Lewis, Metz.*

### CHEM 212: Organic Reactions and Mechanism

(1 Unit)
Prerequisite: CHEM 154.
A continued survey of the mechanisms and reactions of organic molecules focusing on aromatic and carbonyl compounds, and the application of organic reactions toward organic synthesis. Laboratory involves team-designed organic syntheses of biologically relevant molecules and/or synthetic methodology. *Harris, McCaffrey.*

### CHEM 301: Chemical Energetics and Kinetics

(1 Unit)
Prerequisites: CHEM 206, CHEM 212 or CHEM 214 and MATH 141 or equivalent.
An exploration of the basic thermodynamic and kinetic principles that govern the outcome of all chemical reactions and physical processes. Primary emphasis is placed upon macroscopic chemical thermodynamics with applications to solutions, colligative properties and phase equilibria. Additional topics include kinetic molecular theory; the experimental basis for determining reaction rates, rate laws and rate constants; the relationship of rate laws to reaction mechanisms; and the effect of temperature change on the rate constant. *Bieler, Lewis.*

## Requirements for Major

## Additional Required Courses in Chemistry (5 Units)

### CHEM 323: Advanced Laboratory: Biochemistry

(1 Unit)
Prerequisites: CHEM 206, CHEM 337.
The study of biochemical laboratory techniques, including enzyme purification and kinetics; gel exclusion, ion exchange; agarose gel electrophoresis; isolation of nucleic acids; and a special student-designed project. *Rohlman, Streu.*

### CHEM 337: Biochemistry

(1 Unit)
Prerequisite: CHEM 212.
An in-depth study of biochemical structure, catalysis, metabolism and cellular regulation. Understanding living systems through molecular and chemical models. Areas of emphasis include macromolecular structure, enzyme mechanisms and kinetics, metabolic mechanisms and regulation, genomics, and proteomics. Same as BIOL 337. *Rohlman, Streu.*

### CHEM 351: Biophysical Chemistry

(1 Unit)
Prerequisites: CHEM 301, CHEM 337.
Examination of the physical chemistry of macromolecules in living systems. A study of thermodynamics, kinetics, ligand binding and spectroscopy related to the understanding of macromolecular structure and function. *Rohlman, Streu*

## One elective course from:

### CHEM 214: Inorganic Chemistry

(1 Unit)
Prerequisite: CHEM 154

A systematic introduction to the study of the synthesis, reactions, structures and properties of compounds of the elements. Topics include bonding theories, acid-base chemistry, oxidation and reduction chemistry, coordination chemistry and the applications and reactions of these complexes, and solid state chemistry. Lecture and laboratory *Bieler, Lewis, McCaffrey, Metz*

OR

### CHEM 352: Medicinal Chemistry

(1 Unit)
Prerequisite: CHEM 337
This course is designed for upper-level science students with an interest in drug design. Lecture topics will include the common classes of drug targets, pharmacodynamics and pharmacokinetics, drug design and development, chemical approaches to drug discovery, specific medicinal chemistry approaches to antimicrobials, chemotherapeutics, analgesics, and drugs targeting the nervous system. Historical as well as current literature will be presented in both lecture and discussion formats. Students will be expected to become familiar with reading and understanding primary research papers in medicinal chemistry. *Streu.*

## One Chemistry Advanced Lab

### CHEM 321: Advanced Synthesis Laboratory

(1 Unit)
Prerequisites: CHEM 206 and CHEM 212 or CHEM 214.
An exploration of advanced methods of chemical synthesis techniques in both organic and inorganic chemistry. Emphasis is placed on analysis of the synthetic products for purity and qualitative identification, using FT-NMR, FTIR, ultraviolet and visible spectroscopy. Further identification and analysis is done using GC/MS, and LC/MS. *Harris, McCaffrey.*

OR

### CHEM 327: Advanced Physical and Analytical Chemistry Laboratory

(1 Unit)
Prerequisite: CHEM 206 and CHEM 301. Prerequisite or corequisite: CHEM 340.
An exploration of various areas of physical chemistry and advanced problems in analytical chemistry including thermodynamics, kinetics, spectroscopy, x-ray diffraction and quantum mechanics. In carrying out these experiments, students use UV/Vis, fluorescence, ICP, IR, and x-ray fluorescence spectrometers and gain experience with electroanalytical methods, vacuum lines, lasers and x-ray diffraction. Two four-hour laboratories per week. *Bieler, Lewis, Metz.*

## Required Cognate Courses (4 Units)

### BIOL 300: Genetics

(1 Unit)
Prerequisite: BIOL 195 , BIOL 210.
Mechanisms of inheritance and of gene structure and function in living organisms. Both classical and molecular genetics are considered as they relate to function. *Staff.*

## One Semester of Calculus

## MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

# One Year of Physics

## PHYS 115: General Physics

(1 Unit)
Prerequisite: High school algebra. First-year students need permission of instructor.
First semester of an algebra-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Includes analytical, historical and philosophical aspects. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

## PHYS 116: General Physics

(1 Unit)
Prerequisite: PHYS 115.
Second semester of an algebra-based survey of general physics. Topics include electricity and magnetism, light and optics, and atomic and nuclear physics. Includes analytical, historical and philosophical aspects. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff*

**OR**

## PHYS 167: Analytical Physics I

(1 Unit)
Corequisite: MATH 141, or permission of instructor.
First semester of a calculus-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

## PHYS 168: Analytical Physics II

(1 Unit)
Prerequisite: PHYS 167. Corequisite: MATH 143 or permission of instructor.
Second semester of a calculus-based survey of general physics. Topics include electricity and magnetism, light and optics, and select topics in modern physics. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

# Note

All chemistry courses required for the major must be taken for a numerical grade, except those offered only on a credit/no credit basis. Students who intend to apply for entrance into medical or dental schools should not take basic chemistry courses on a credit/no credit basis, and students majoring in other sciences are strongly discouraged from doing so.

The department expects that chemistry and biochemistry majors will complete the CHEM 206 requirement no later than the end of the junior year because this course is a prerequisite for the Advanced Laboratory series.

# Chemistry Minor

## Requirements for Minor

- All courses for the minor must be taken for a numerical grade.

## Six Units in Chemistry:

### CHEM 152: Principles of Chemistry

(1 Unit)
Basic principles of stoichiometry, atomic and molecular structure, equilibrium, thermodynamics and kinetics. Thematic content will be used to explain how the foundational principles of chemistry can be used to explain the world around us. Topical applications and issues will vary with instructor. *Bieler, Harris, Lewis, McCaffrey, Metz, Rohlman, Streu.*

### CHEM 154: Organic Structure and Reactivity

(1 Unit)
Prerequisite: CHEM 152
This course builds on the atomic and molecular foundation developed in CHEM 152. Student are introduced to reactivity and mechanistic details of organic acid/base chemistry as well as model organic reactions. Quantitative reaction concepts necessary for organic chemistry are emphasized including: stoichiometry, thermochemistry, kinetic theory, thermodynamics, and dynamic equilibrium. Lecture and laboratory. *Harris, McCaffrey, Streu*

### CHEM 206: Chemical Analysis

(1 Unit)
Prerequisites: CHEM 152 or CHEM 154 .
Laboratory course emphasizing the collection, analysis and interpretation of quantitative data, using both traditional and instrumental techniques. *Bieler, Lewis, Metz.*

### CHEM 301: Chemical Energetics and Kinetics

(1 Unit)
Prerequisites: CHEM 206, CHEM 212 or CHEM 214 and MATH 141 or equivalent.
An exploration of the basic thermodynamic and kinetic principles that govern the outcome of all chemical reactions and physical processes. Primary emphasis is placed upon macroscopic chemical thermodynamics with applications to solutions, colligative properties and phase equilibria. Additional topics include kinetic molecular theory; the experimental basis for determining reaction rates, rate laws and rate constants; the relationship of rate laws to reaction mechanisms; and the effect of temperature change on the rate constant. *Bieler, Lewis.*

AND

2 units with laboratory components at the 200- or 300-level.

(For example, CHEM 212: Organic Chemistry: Mechanisms & Synthesis, CHEM 214: Inorganic Chemistry, CHEM 321: Advanced Synthesis Laboratory, CHEM 327: Advanced Physical and Analytical Chemistry Laboratory)

## One Unit in Cognate Areas:

## One Semester of Calculus:

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

# Chemistry Minor, with Education Concentration

## Requirements for Minor with Education Concentration

## Five Units in Chemistry:

### CHEM 152: Principles of Chemistry

(1 Unit)
Basic principles of stoichiometry, atomic and molecular structure, equilibrium, thermodynamics and kinetics. Thematic content will be used to explain how the foundational principles of chemistry can be used to explain the world around us. Topical applications and issues will vary with instructor. *Bieler, Harris, Lewis, McCaffrey, Metz, Rohlman, Streu.*

### CHEM 154: Organic Structure and Reactivity

(1 Unit)
Prerequisite: CHEM 152
This course builds on the atomic and molecular foundation developed in CHEM 152. Student are introduced to reactivity and mechanistic details of organic acid/base chemistry as well as model organic reactions. Quantitative reaction concepts necessary for organic chemistry are emphasized including: stoichiometry, thermochemistry, kinetic theory, thermodynamics, and dynamic equilibrium. Lecture and laboratory. *Harris, McCaffrey, Streu*

### CHEM 212: Organic Reactions and Mechanism

(1 Unit)
Prerequisite: CHEM 154.
A continued survey of the mechanisms and reactions of organic molecules focusing on aromatic and carbonyl compounds, and the application of organic reactions toward organic synthesis. Laboratory involves team-designed organic syntheses of biologically relevant molecules and/or synthetic methodology. *Harris, McCaffrey.*

### CHEM 301: Chemical Energetics and Kinetics

(1 Unit)
Prerequisites: CHEM 206, CHEM 212 or CHEM 214 and MATH 141 or equivalent.
An exploration of the basic thermodynamic and kinetic principles that govern the outcome of all chemical reactions and physical processes. Primary emphasis is placed upon macroscopic chemical thermodynamics with applications to solutions, colligative properties and phase equilibria. Additional topics include kinetic molecular theory; the experimental basis for determining reaction rates, rate laws and rate constants; the relationship of rate laws to reaction mechanisms; and the effect of temperature change on the rate constant. *Bieler, Lewis.*

## Plus One Unit From:

### CHEM 200: Chemistry and Social Problems

(1 Unit)
Prerequisite: Junior/senior standing.
An examination of selected, important social problems which have a technological basis. Discussions focus upon the economic, political and ethical dimensions of the problems, as well as the science and technology involved, and include problems such as the greenhouse effect and global warming, chlorofluorocarbons and the stratospheric ozone layer, chemical and radioactive waste disposal, and the use of pesticides. Risk/benefit analysis and the connection between chemical exposure and biological harm are important features of the discussions. Laboratory work involves the analysis of water samples for trace metals and organic contaminants, using state of the art instrumentation, and will include attempts to assess the validity of the analytical results. Intended for non-science majors as well as science majors. *Lewis.*

### CHEM 206: Chemical Analysis

(1 Unit)
Prerequisites: CHEM 152 or CHEM 154 .
Laboratory course emphasizing the collection, analysis and interpretation of quantitative data, using both traditional and instrumental techniques. *Bieler, Lewis, Metz.*

### CHEM 214: Inorganic Chemistry

(1 Unit)
Prerequisite: CHEM 154
A systematic introduction to the study of the synthesis, reactions, structures and properties of compounds of the elements. Topics include bonding theories, acid-base chemistry, oxidation and reduction chemistry, coordination chemistry and the applications and reactions of these complexes, and solid state chemistry. Lecture and laboratory *Bieler, Lewis, McCaffrey, Metz*

### CHEM 337: Biochemistry

(1 Unit)
Prerequisite: CHEM 212.

An in-depth study of biochemical structure, catalysis, metabolism and cellular regulation. Understanding living systems through molecular and chemical models. Areas of emphasis include macromolecular structure, enzyme mechanisms and kinetics, metabolic mechanisms and regulation, genomics, and proteomics. Same as BIOL 337. *Rohlman, Streu.*

## Two Units in Cognate Areas:

## One Semester of Calculus:

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## One Semester of Physics:

### PHYS 115: General Physics

(1 Unit)
Prerequisite: High school algebra. First-year students need permission of instructor.
First semester of an algebra-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Includes analytical, historical and philosophical aspects. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

**OR**

### PHYS 167: Analytical Physics I

(1 Unit)
Corequisite: MATH 141, or permission of instructor.
First semester of a calculus-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

## Completion of Education Concentration

# Chemistry, B.A.

## Common Core

### CHEM 152: Principles of Chemistry

(1 Unit)
Basic principles of stoichiometry, atomic and molecular structure, equilibrium, thermodynamics and kinetics. Thematic content will be used to explain how the foundational principles of chemistry can be used to explain the world around us. Topical applications and issues will vary with instructor. *Bieler, Harris, Lewis, McCaffrey, Metz, Rohlman, Streu.*

### CHEM 154: Organic Structure and Reactivity

(1 Unit)
Prerequisite: CHEM 152
This course builds on the atomic and molecular foundation developed in CHEM 152. Student are introduced to reactivity and mechanistic details of organic acid/base chemistry as well as model organic reactions. Quantitative reaction concepts necessary for organic chemistry are emphasized including: stoichiometry, thermochemistry, kinetic theory, thermodynamics, and dynamic equilibrium. Lecture and laboratory. *Harris, McCaffrey, Streu*

### CHEM 206: Chemical Analysis

(1 Unit)
Prerequisites: CHEM 152 or CHEM 154 .
Laboratory course emphasizing the collection, analysis and interpretation of quantitative data, using both traditional and instrumental techniques. *Bieler, Lewis, Metz.*

### CHEM 212: Organic Reactions and Mechanism

(1 Unit)
Prerequisite: CHEM 154.
A continued survey of the mechanisms and reactions of organic molecules focusing on aromatic and carbonyl compounds, and the application of organic reactions toward organic synthesis. Laboratory involves team-designed organic syntheses of biologically relevant molecules and/or synthetic methodology. *Harris, McCaffrey.*

### CHEM 301: Chemical Energetics and Kinetics

(1 Unit)
Prerequisites: CHEM 206, CHEM 212 or CHEM 214 and MATH 141 or equivalent.
An exploration of the basic thermodynamic and kinetic principles that govern the outcome of all chemical reactions and physical processes. Primary emphasis is placed upon macroscopic chemical thermodynamics with applications to solutions, colligative properties and phase equilibria. Additional topics include kinetic molecular theory; the experimental basis for determining reaction rates, rate laws and rate constants; the relationship of rate laws to reaction mechanisms; and the effect of temperature change on the rate constant. *Bieler, Lewis.*

## Requirements for Major

## Additional Required Courses in Chemistry (5 Units)

### CHEM 214: Inorganic Chemistry

(1 Unit)
Prerequisite: CHEM 154
A systematic introduction to the study of the synthesis, reactions, structures and properties of compounds of the elements. Topics include bonding theories, acid-base chemistry, oxidation and reduction chemistry, coordination

chemistry and the applications and reactions of these complexes, and solid state chemistry. Lecture and laboratory *Bieler, Lewis, McCaffrey, Metz*

## CHEM 321: Advanced Synthesis Laboratory

(1 Unit)
Prerequisites: CHEM 206 and CHEM 212 or CHEM 214.
An exploration of advanced methods of chemical synthesis techniques in both organic and inorganic chemistry. Emphasis is placed on analysis of the synthetic products for purity and qualitative identification, using FT-NMR, FTIR, ultraviolet and visible spectroscopy. Further identification and analysis is done using GC/MS, and LC/MS. *Harris, McCaffrey.*

## CHEM 327: Advanced Physical and Analytical Chemistry Laboratory

(1 Unit)
Prerequisite: CHEM 206 and CHEM 301. Prerequisite or corequisite: CHEM 340.
An exploration of various areas of physical chemistry and advanced problems in analytical chemistry including thermodynamics, kinetics, spectroscopy, x-ray diffraction and quantum mechanics. In carrying out these experiments, students use UV/Vis, fluorescence, ICP, IR, and x-ray fluorescence spectrometers and gain experience with electroanalytical methods, vacuum lines, lasers and x-ray diffraction. Two four-hour laboratories per week. *Bieler, Lewis, Metz.*

## CHEM 340: Quantum Chemistry

(1 Unit)
Prerequisite: Permission of instructor.
Normally a student is expected to have completed CHEM 121 , CHEM 123 , CHEM 211 , CHEM 212, CHEM 206 and CHEM 301 as well as two units of calculus and two units of physics. The microscopic or molecular basis for chemistry. Among the topics covered are the use of Schrodinger wave mechanics to examine the energies of atoms and molecules, including structure and chemical bonds; comparison of calculated energies with experimental values obtained from atomic and molecular spectroscopy; and the use of statistical mechanics to calculate thermodynamic variables and equilibrium constants. *Bieler, Lewis.*

## CHEM 350: Advanced Organic Chemistry

(1/2 Unit)
Prerequisites: CHEM 154, CHEM 212.
Reinforces and extends the concepts introduced in CHEM 154, CHEM 212 and introduces new concepts, reactions and molecular theories. Taught with one of two emphases: (1) the synthetic course extends understanding of organic reactions, introduces the most current synthetic organic methods and asks students to use their knowledge to propose syntheses of complex molecules; (2) the physical/mechanistic course includes topics such as aromaticity and models used to explain thermal and photochemical concerted reactions such as frontier orbital theory, Huckel-Mobius transition state theory and the conservation of orbital symmetry. Students in both courses are taught to read and understand the chemical literature, then write about and orally present the novel chemistry they have learned. *Harris, McCaffrey.*

**OR**

## CHEM 353: Spectroscopy

(1/2 Unit)
Prerequisite: CHEM 340.

General principles and theories of light absorption and emission at the molecular level, including the application of symmetry and group theory. Detailed applications to IR, Raman, microwave, UV-visible and radiofrequency spectroscopy (NMR, EPR). Additional topics chosen from X-ray crystallography, mass spectroscopy, photochemistry and Mossbauer spectroscopy. *Bieler, Lewis, Metz.*

### CHEM 356: Advanced Inorganic Chemistry

(1/2 Unit)
Prerequisite: CHEM 214.
An advanced-level discussion of periodic properties, chemical bonding, and acidbase concepts with an emphasis upon the bonding and properties of transition metal complexes. *McCaffrey, Metz.*

## Required Cognate Courses (4 Units)

## One Year of Calculus

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## One Year of Physics

acceptable

### PHYS 115: General Physics

(1 Unit)
Prerequisite: High school algebra. First-year students need permission of instructor.
First semester of an algebra-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics,

thermodynamics, wave motion, and sound. Includes analytical, historical and philosophical aspects. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

### PHYS 116: General Physics

(1 Unit)
Prerequisite: PHYS 115.
Second semester of an algebra-based survey of general physics. Topics include electricity and magnetism, light and optics, and atomic and nuclear physics. Includes analytical, historical and philosophical aspects. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff*

preferably:

### PHYS 167: Analytical Physics I

(1 Unit)
Corequisite: MATH 141, or permission of instructor.
First semester of a calculus-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

### PHYS 168: Analytical Physics II

(1 Unit)
Prerequisite: PHYS 167. Corequisite: MATH 143 or permission of instructor.
Second semester of a calculus-based survey of general physics. Topics include electricity and magnetism, light and optics, and select topics in modern physics. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

## Note

All chemistry courses required for the major must be taken for a numerical grade, except those offered only on a credit/no credit basis. Students who intend to apply for entrance into medical or dental schools should not take basic chemistry courses on a credit/no credit basis, and students majoring in other sciences are strongly discouraged from doing so.

The department expects that chemistry and biochemistry majors will complete the CHEM 206 requirement no later than the end of the junior year because this course is a prerequisite for the Advanced Laboratory series.

# Chemistry, with Education Concentration, B.A.

## Requirements for Major with Education Concentration

Eight and one-half units in chemistry. The Chemistry Department offers two majors, either of which may be used as a teaching major.

## The Majors Share a Common Core Consisting of the Following:

### CHEM 152: Principles of Chemistry

(1 Unit)
Basic principles of stoichiometry, atomic and molecular structure, equilibrium, thermodynamics and kinetics. Thematic content will be used to explain how the foundational principles of chemistry can be used to explain the world around us. Topical applications and issues will vary with instructor. *Bieler, Harris, Lewis, McCaffrey, Metz, Rohlman, Streu.*

## CHEM 154: Organic Structure and Reactivity

(1 Unit)
Prerequisite: CHEM 152
This course builds on the atomic and molecular foundation developed in CHEM 152. Student are introduced to reactivity and mechanistic details of organic acid/base chemistry as well as model organic reactions. Quantitative reaction concepts necessary for organic chemistry are emphasized including: stoichiometry, thermochemistry, kinetic theory, thermodynamics, and dynamic equilibrium. Lecture and laboratory. *Harris, McCaffrey, Streu*

## CHEM 206: Chemical Analysis

(1 Unit)
Prerequisites: CHEM 152 or CHEM 154 .
Laboratory course emphasizing the collection, analysis and interpretation of quantitative data, using both traditional and instrumental techniques. *Bieler, Lewis, Metz.*

## CHEM 214: Inorganic Chemistry

(1 Unit)
Prerequisite: CHEM 154
A systematic introduction to the study of the synthesis, reactions, structures and properties of compounds of the elements. Topics include bonding theories, acid-base chemistry, oxidation and reduction chemistry, coordination chemistry and the applications and reactions of these complexes, and solid state chemistry. Lecture and laboratory *Bieler, Lewis, McCaffrey, Metz*

## CHEM 212: Organic Reactions and Mechanism

(1 Unit)
Prerequisite: CHEM 154.
A continued survey of the mechanisms and reactions of organic molecules focusing on aromatic and carbonyl compounds, and the application of organic reactions toward organic synthesis. Laboratory involves team-designed organic syntheses of biologically relevant molecules and/or synthetic methodology. *Harris, McCaffrey.*

## CHEM 301: Chemical Energetics and Kinetics

(1 Unit)
Prerequisites: CHEM 206, CHEM 212 or CHEM 214 and MATH 141 or equivalent.
An exploration of the basic thermodynamic and kinetic principles that govern the outcome of all chemical reactions and physical processes. Primary emphasis is placed upon macroscopic chemical thermodynamics with applications to solutions, colligative properties and phase equilibria. Additional topics include kinetic molecular theory; the experimental basis for determining reaction rates, rate laws and rate constants; the relationship of rate laws to reaction mechanisms; and the effect of temperature change on the rate constant. *Bieler, Lewis.*

## In Addition to These Six Units, the Required Courses Are:

Chemistry Major:

## CHEM 321: Advanced Synthesis Laboratory

(1 Unit)
Prerequisites: CHEM 206 and CHEM 212 or CHEM 214.
An exploration of advanced methods of chemical synthesis techniques in both organic and inorganic chemistry. Emphasis is placed on analysis of the synthetic products for purity and qualitative identification, using FT-NMR, FTIR, ultraviolet and visible spectroscopy. Further identification and analysis is done using GC/MS, and LC/MS. *Harris, McCaffrey.*

**OR**

## CHEM 327: Advanced Physical and Analytical Chemistry Laboratory

(1 Unit)
Prerequisite: CHEM 206 and CHEM 301. Prerequisite or corequisite: CHEM 340.
An exploration of various areas of physical chemistry and advanced problems in analytical chemistry including thermodynamics, kinetics, spectroscopy, x-ray diffraction and quantum mechanics. In carrying out these experiments, students use UV/Vis, fluorescence, ICP, IR, and x-ray fluorescence spectrometers and gain experience with electroanalytical methods, vacuum lines, lasers and x-ray diffraction. Two four-hour laboratories per week. *Bieler, Lewis, Metz.*

## CHEM 340: Quantum Chemistry

(1 Unit)
Prerequisite: Permission of instructor.
Normally a student is expected to have completed CHEM 121 , CHEM 123 , CHEM 211 , CHEM 212, CHEM 206 and CHEM 301 as well as two units of calculus and two units of physics. The microscopic or molecular basis for chemistry. Among the topics covered are the use of Schrodinger wave mechanics to examine the energies of atoms and molecules, including structure and chemical bonds; comparison of calculated energies with experimental values obtained from atomic and molecular spectroscopy; and the use of statistical mechanics to calculate thermodynamic variables and equilibrium constants. *Bieler, Lewis.*

And One-half Unit Chosen From:

## CHEM 350: Advanced Organic Chemistry

(1/2 Unit)
Prerequisites: CHEM 154, CHEM 212.
Reinforces and extends the concepts introduced in CHEM 154, CHEM 212 and introduces new concepts, reactions and molecular theories. Taught with one of two emphases: (1) the synthetic course extends understanding of organic reactions, introduces the most current synthetic organic methods and asks students to use their knowledge to propose syntheses of complex molecules; (2) the physical/mechanistic course includes topics such as aromaticity and models used to explain thermal and photochemical concerted reactions such as frontier orbital theory, Huckel-Mobius transition state theory and the conservation of orbital symmetry. Students in both courses are taught to read and understand the chemical literature, then write about and orally present the novel chemistry they have learned. *Harris, McCaffrey.*

OR

## CHEM 353: Spectroscopy

(1/2 Unit)
Prerequisite: CHEM 340.
General principles and theories of light absorption and emission at the molecular level, including the application of symmetry and group theory. Detailed applications to IR, Raman, microwave, UV-visible and radiofrequency spectroscopy (NMR, EPR). Additional topics chosen from X-ray crystallography, mass spectroscopy, photochemistry and Mossbauer spectroscopy. *Bieler, Lewis, Metz.*

**OR**

### CHEM 356: Advanced Inorganic Chemistry

(1/2 Unit)
Prerequisite: CHEM 214.
An advanced-level discussion of periodic properties, chemical bonding, and acidbase concepts with an emphasis upon the bonding and properties of transition metal complexes. *McCaffrey, Metz.*

## Four Units in Cognate Areas:

## Two Semesters of Calculus

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## Two Semesters of Physics

### PHYS 115: General Physics

(1 Unit)
Prerequisite: High school algebra. First-year students need permission of instructor.

First semester of an algebra-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Includes analytical, historical and philosophical aspects. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

### PHYS 116: General Physics

(1 Unit)
Prerequisite: PHYS 115.
Second semester of an algebra-based survey of general physics. Topics include electricity and magnetism, light and optics, and atomic and nuclear physics. Includes analytical, historical and philosophical aspects. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff*

**OR**

### PHYS 167: Analytical Physics I

(1 Unit)
Corequisite: MATH 141, or permission of instructor.
First semester of a calculus-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

### PHYS 168: Analytical Physics II

(1 Unit)
Prerequisite: PHYS 167. Corequisite: MATH 143 or permission of instructor.
Second semester of a calculus-based survey of general physics. Topics include electricity and magnetism, light and optics, and select topics in modern physics. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

## Completion of Education Concentration

# Communication Studies

# Faculty

**Karen T. Erlandson**, professor.
B.A., M.A., Michigan State University; Ph.D., University of California, Santa Barbara. Appointed 2002.

**Megan R. Hill**, chair and associate professor.
B.A., Oakland University; M.A., Ph.D., The Ohio State University. Appointed 2013.

**Katey A. Price**, assistant professor.

B.A., Lake Superior State University; M.A., Central Michigan University, Ph.D., The Ohio State University. Appointed 2015.

**Jeffrey Cox**, assistant professor.
B.A., Kenyon College; M.A., Indiana University, Ph.D., Michigan State University. Appointed 2013.

**Katie Broekema-Tolksdorf**, visiting instructor.

B.A., Albion College; M.A., Central Michigan University. Appointed 2019.

**Jasmine LaBine,** visiting instructor.

B.A., Western Michigan University; M.A., Western Michigan University. Appointed 2021.

**Dan Lake**, visiting instructor.

B.A., Michigan State University ; M.A., Northwestern University. Appointed 2021.

# Introduction

Communication focuses on how people use messages to generate meaning within and across all kinds of contexts, cultures, channels, and media. It is intertwined with virtually every aspect of our lives and plays an integral role in everything from the development of our personal identities to the processes involved with changing our societies.

Our mission is to provide students with an understanding of communication that will help them fulfill the liberal arts mission of developing critical thinking and transferable skills in order to become educated and ethical members of a global society. Specifically, we provide a curriculum that will:

- help students understand the importance of communication in a variety of contexts;
- help students understand major theories in communication studies;
- help students understand the research process;
- help students gain competency in presentation skills;
- prepare students for graduate study in communication studies and/or professional endeavors;
- prepare students with the communication skills necessary to create and maintain healthy relationships and communities.

Communication Studies Department Website

# Career Opportunities

Although this department's courses are within the mainstream of the liberal arts tradition, intended to provide important theory and practice for all Albion students, concentration in communication studies is especially valuable for students preparing for professions such as marketing, public relations, advertising, sports marketing and management, event planning, politics, public service, education and the law.

# Special Features

Internships are viewed as valuable learning experiences, and the department encourages all interested students to explore and pursue these opportunities. Juniors and seniors may participate in communication internships covering areas such as public relations, event planning, broadcasting and marketing, to name only a few. These internships may be completed during fall or spring semester locally, over the summer in areas such as Detroit or Chicago, or as part of an off-campus program such as Australearn, the Chicago Center or Boston University's London program. Students are encouraged to discuss these opportunities with faculty in the Communication Studies Department for more information.

In addition, the Communication Studies Department awards several scholarships each year through two different scholarship funds. The Bernard T. Lomas Scholarship is awarded to outstanding incoming first-year students majoring in communication studies or a related field, and the William C. Henning Merit Scholarship, which is awarded to a

select group of current communication studies majors who demonstrate academic excellence and promise. The department also sponsors the annual Kropscott Symposium, which provides students the opportunity to attend lectures and participate in workshops presented by scholars and practitioners in various communication fields.

The department offers students the option of completing several different majors or minors, including: a general communication studies major/minor, an integrated marketing communication major, a sport communication major/minor, or a health communication minor.

# Student Learning Outcomes

Communication Studies Major

*1: Describe the Communication discipline and its central questions.*

*2 : Employ Communication theories, perspectives, principles, and concepts.*

*3 : Engage in Communication inquiry.*

*4 : Create messages appropriate to the audience, purpose, and context.*

*5 : Critically analyze messages.*

Integrated Marketing Communication Major

*1: Describe the Communication discipline and its central questions.*

*2 : Employ Communication theories, perspectives, principles, and concepts.*

*3 : Create messages appropriate to the audience, purpose, and context.*

*4 : Critically analyze messages.*

*5 : Demonstrate the ability to accomplish communicative goals (self-efficacy).*

*6 : Utilize communication to embrace difference.*

*7: Influence public discourse.*

Sport Communication Major

*1: Define a personal connection within the professional and academic sports communication fields.*

*2 : Effectively communicate sports messaging across a variety of platforms, including writing, speaking and mediated communications.*

*3 : Critically analyze the socio-political connections with the culture and industry of sports.*

*4 : Apply effective organizational communication techniques.*

*5 : Articulate the global reach of sport.*

*6 : Recognize diversity issues in sport.*

Communication Studies Minor

*1: Describe the Communication discipline and its central questions.*

*2 : Employ Communication theories, perspectives, principles, and concepts.*

*3 : Create messages appropriate to the audience, purpose, and context.*

*4 : Critically analyze messages.*

*5 : Demonstrate the ability to accomplish communicative goals (self-efficacy).*

Sport Communication Minor

*1: Define a personal connection within the professional and academic sports communication fields.*

*2 : Critically analyze the socio-political connections with the culture and industry of sports.*

*3 : Apply effective organizational communication techniques.*

*4 : Articulate the global reach of sport.*

*5 : Recognize diversity issues in sport.*

Health Communication Minor

*1: Understand the connection between communication theory and the health professions.*

*2: Gain a solid understanding of the social sciences and the groundings and methodologies of communication research.*

*3: Put health, risk, and environmental communication perspectives into practice after graduation.*

# Communication Studies Minor

## Requirements for Minor

A minimum of six units including:

- 2 units from List 1
- 1 unit from List 2

## Common Core:

### COMM 101: Introduction to Human Communication

(1 Unit)
An introduction to the study of communication. Students investigate communication theory, models, symbols and signs, verbal and nonverbal communication, interpersonal communication, group communication, organizational communication, mass communication, communication ethics and new communication technologies. *Staff.*

### COMM 241: Public Speaking

(1 Unit)
A theoretical and practical study of speaking in public. Students are introduced to classical and contemporary critical

standards of excellence in oral style and delivery, while they develop skills in the art of speaking effectively in informational and persuasive situations. *Staff.*

### COMM 300: Communication Research Methods

(1 Unit)
Prerequisites: COMM 101 and at least one 200-level communication studies course.
Provides an overview of the concepts and tools by which communication research is designed, conducted, interpreted, and critically evaluated. Aims to help students become knowledgeable consumers and producers of quantitative and qualitative communication research. *Hill.*

# Communication Studies, B.A.

The curriculum for a communication studies major is composed of a minimum of nine units designed around two components: (1) a common core of three fundamental courses, and (2) courses that support an understanding of theories and research in communication studies.

## Requirements for Communication Studies Major (9 units)

- Common Core: COMM 101, COMM 241, COMM 300
- 3 units from List 1
- 3 units from List 2

## Common Core

All majors must complete the common core, which consists of three units:

### COMM 101: Introduction to Human Communication

(1 Unit)
An introduction to the study of communication. Students investigate communication theory, models, symbols and signs, verbal and nonverbal communication, interpersonal communication, group communication, organizational communication, mass communication, communication ethics and new communication technologies. *Staff.*

### COMM 241: Public Speaking

(1 Unit)
A theoretical and practical study of speaking in public. Students are introduced to classical and contemporary critical standards of excellence in oral style and delivery, while they develop skills in the art of speaking effectively in informational and persuasive situations. *Staff.*

### COMM 300: Communication Research Methods

(1 Unit)
Prerequisites: COMM 101 and at least one 200-level communication studies course.
Provides an overview of the concepts and tools by which communication research is designed, conducted, interpreted, and critically evaluated. Aims to help students become knowledgeable consumers and producers of quantitative and qualitative communication research. *Hill.*

# Beyond the Core:

Each communication studies major must choose three units from each of following lists.

## List 1 (3 units)

### COMM 202: Communication in Interpersonal Contexts

(1 Unit)
The course examines the theory and research behind interpersonal communication. Explores communication processes in dyads, families, teams, and in organizational settings. Teaches skills to improve students' communication competence in both personal and professional environments. The course also covers self-awareness, self-disclosure, relational development, and conflict resolution. *Erlandson.*

### COMM 205: Mass Communication

(1 Unit)
An introduction to the different modes of mass communication--from the printing press to the Internet--from historical and cultural perspectives in order to understand the impact of mass communication on society. Topics include mass communication's production and reproduction of cultural mores and values, and the controversy surrounding media "effects." *Staff.*

### COMM 206: Event Marketing & Management

(1 Uint)
Event Management is a theoretical and practical study of events. While interdisciplinary in nature, event planning theories covered in this class will be within the framework of strategic communication. Students will learn the art of event planning through the creation and implementation of an event outline. Students will utilize qualitative and quantitative data in event evaluation. This class will contain an overview of a multitude of events, including nonprofit fundraisers, weddings, community events, corporate engagements, and private parties.

### COMM 207: Communicating Gender

(1 Unit)
An exploration of the ways in which gender and communication interact. Students are introduced to research in the field and observe and analyze the ways in which our cultural construction of gender impacts on how we communicate and judge the communication of others. *Erlandson, Staff.*

### COMM 208: Health Communication

(1 Unit)
Health communication is a rapidly growing field in the discipline because of its potential to aid in understanding and influencing outcomes in a variety of interpersonal, organizational, and mass communication contexts. Communication is the key to disease prevention, health promotion, and behavior change. This course will introduce you to the exciting and increasingly important topics in the health communication field.

### COMM 209: Sport Communication

(1 Unit)
An examination of the role of communication in sports contexts. Students investigate communication theory and models and consider how communication in sports functions within a contemporary culture. Includes exploration of the media environment as well as culture in and around sport. *Boyan.*

## COMM 211: Risk Communication

(1 Unit)
This course is an introduction to risk communication, giving a communication research perspective to wide-ranging applications of individuals' risk perception and decision-making. Although a good amount of the course draws examples from health and medicine, we take a broader view of risk and behavior that should be interesting for students of any background. Specific topics will include the psychology behind risk-taking, public service communication about health and environmental catastrophes, crisis communication and public relations, and how gain-loss framing affects financially risky decisions.

## COMM 213: Intercultural Communication

(1 Unit)
An exploration of the role communication plays in defining and sustaining culture both globally and locally. By applying current research and theories in intercultural communication, students are introduced to major topics pertaining to communication between cultures. Topics include, but are not limited to: the way a culture's deep meaning structure impacts the way people communicate, culture-specific verbal and nonverbal norms, advice on verbal and nonverbal behavior when doing business internationally, adjusting to culture shock and exploring various subcultures in the United States. *Erlandson.*

## COMM 215: Social Media

(1 Unit)
An Examination of social media and the role in communication today. Students investigate social media elements, media and interpersonal communication theories, communication stratigies, and socio-cultural implications of social media. Topics include social media production and reproduction of cultural mores and values, consumption patterns of social media content, and implication of McLuhan's "the medium is the message" perspective.

## COMM 287: Selected Topics

(1/4 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## COMM 288: Selected Topics

(1/2 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## COMM 289: Selected Topics

(1 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

List 2 (3 units):

**All 300-level courses have a prerequisite of COMM 101 and at least one 200-level course.**

## COMM 303: Communications in Sports Organizations

(1 Unit)
Provides an understanding of organizational communication theories and practices as they relate to the creation, maintenance, and change of culture and practices in sports organizations. This course will examine the impact of internal and external communication environments and how sports organizations adapt their communication and culture in response. Students will practice application, analysis, and critical thinking about communication in sports organizations through research projects. *Staff.*

## COMM 306: Public Relations

(1 Unit)
A theoretical and practical examination of the public relations field, including internal and external communications as well as media relations. Students occasionally gain practical experience by participating in a major campaign. *Staff.*

## COMM 308: Heath Disparities

(1 Unit)
Understanding and recognizing the preventable differences in health as well as health care is inherent in working toward reducing and eliminating the inequality experienced by so many due to their race, gender, age, religion, language, sexual orientation, mental and physical ability, socio-economic status, and geography. This course will cover the historical, cultural, and current issues facing these groups through a social ecological perspective that highlights the importance of communication in not only perpetrating and reinforcing these health inequalities but also in alleviating them.

## COMM 309: Sports Marketing

(1Units)
This course will examine the history and contemporary application of sports marketing as a method to achieve goals. Emphasis will be given to how sports teams use sports marketing strategies, including marketing research, market segmentation, branding, sponsorships, licensing, global sports marketing, and public relations to achieve business objectives aimed at specific constituencies, including consumers, employees, and athletes.

## COMM 311: Environmental Communication

(1 Unit)
Prerequisite: COMM 101
A study of how the natural environment is socially constructed through its representation in word and image. After introducing students to fundamental environmental terminology, the course will consider a number of key environmental communicators, their ideological positions, and how they shape their messages. This will be followed by a discussion of audiences and environmental communication ethics. Offered occasionally. *Staff.*

## COMM 312: Political Communication

(1 Unit)
Prerequisites:  COMM 101 and at least one 200-level course, or permission of instructor.
By focusing on the interaction between media, politics, and public opinion, the course provides a survey of the field of political communication, with special attention paid to the role of political communication in democratic society, the audiences for political communication, what it means to be a citizen of the United States today, the effects of media on citizens' engagement with politics, and the interaction of politics and popular culture. *Hill.*

### COMM 330: Advertising

(1 Unit)

### COMM 351: Persuasion

(1 Unit)
A theoretical analysis of the process of influencing belief, attitude or behavior through appeals to reason, emotion and ethos. Students investigate experimental and rhetorical theories in the field and the ethical considerations of persuasion. *Staff.*

### COMM 387: Selected Topics

(1/4 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

### COMM 388: Selected Topics

(1/2 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

### COMM 389: Selected Topics

(1 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

### COMM 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

### COMM 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

## In Addition:

All COMM 287, COMM 288, COMM 289 and COMM 387, COMM 388, COMM 389 courses (Selected Topics) offered will be accepted as electives toward the major. Students may complete multiple Selected Topics courses and count them toward the major, but may not complete the same course more than once. In addition, internships (COMM 391, COMM 392) and directed studies (COMM 411, COMM 412) may be counted toward the major if they are approved by the department in advance and are taken within the Communication Studies Department (as COMM 391, COMM 392, COMM 411, or COMM 412).

# Health Communication Minor

The following are required for the minor in Health Communication:

## Core Courses:

### COMM 101: Introduction to Human Communication

(1 Unit)
An introduction to the study of communication. Students investigate communication theory, models, symbols and signs, verbal and nonverbal communication, interpersonal communication, group communication, organizational communication, mass communication, communication ethics and new communication technologies. *Staff.*

### COMM 208: Health Communication

(1 Unit)
Health communication is a rapidly growing field in the discipline because of its potential to aid in understanding and influencing outcomes in a variety of interpersonal, organizational, and mass communication contexts. Communication is the key to disease prevention, health promotion, and behavior change. This course will introduce you to the exciting and increasingly important topics in the health communication field.

### COMM 211: Risk Communication

(1 Unit)
This course is an introduction to risk communication, giving a communication research perspective to wide-ranging applications of individuals' risk perception and decision-making. Although a good amount of the course draws examples from health and medicine, we take a broader view of risk and behavior that should be interesting for students of any background. Specific topics will include the psychology behind risk-taking, public service communication about health and environmental catastrophes, crisis communication and public relations, and how gain-loss framing affects financially risky decisions.

### COMM 300: Communication Research Methods

(1 Unit)
Prerequisites: COMM 101 and at least one 200-level communication studies course.
Provides an overview of the concepts and tools by which communication research is designed, conducted, interpreted, and critically evaluated. Aims to help students become knowledgeable consumers and producers of quantitative and qualitative communication research. *Hill.*

### COMM 308: Heath Disparities

(1 Unit)
Understanding and recognizing the preventable differences in health as well as health care is inherent in working toward reducing and eliminating the inequality experienced by so many due to their race, gender, age, religion, language, sexual orientation, mental and physical ability, socio-economic status, and geography. This course will cover the historical, cultural, and current issues facing these groups through a social ecological perspective that highlights the importance of communication in not only perpetrating and reinforcing these health inequalities but also in alleviating them.

### COMM 311: Environmental Communication

(1 Unit)
Prerequisite: COMM 101
A study of how the natural environment is socially constructed through its representation in word and image. After introducing students to fundamental environmental terminology, the course will consider a number of key environmental communicators, their ideological positions, and how they shape their messages. This will be followed by a discussion of audiences and environmental communication ethics. Offered occasionally. *Staff.*

# Integrated Marketing Communication, BA

## Requirements for Integrated Marketing Communication Major (10 Units)

## Common Communication Studies Core

All majors must complete the common Communication Studies core, which consists of three units:

### COMM 101: Introduction to Human Communication

(1 Unit)
An introduction to the study of communication. Students investigate communication theory, models, symbols and signs, verbal and nonverbal communication, interpersonal communication, group communication, organizational communication, mass communication, communication ethics and new communication technologies. *Staff.*

### COMM 241: Public Speaking

(1 Unit)
A theoretical and practical study of speaking in public. Students are introduced to classical and contemporary critical standards of excellence in oral style and delivery, while they develop skills in the art of speaking effectively in informational and persuasive situations. *Staff.*

### COMM 300: Communication Research Methods

(1 Unit)
Prerequisites: COMM 101 and at least one 200-level communication studies course.
Provides an overview of the concepts and tools by which communication research is designed, conducted, interpreted, and critically evaluated. Aims to help students become knowledgeable consumers and producers of quantitative and qualitative communication research. *Hill.*

## Beyond the Core:

Each Integrated Marketing Communication major must complete the following Integrated Marketing Communication Core courses:

## Integrated Marketing Communication Core (4 Units) Complete 4 Units from the following list:

### COMM 205: Mass Communication

(1 Unit)
An introduction to the different modes of mass communication--from the printing press to the Internet--from historical and cultural perspectives in order to understand the impact of mass communication on society. Topics include mass communication's production and reproduction of cultural mores and values, and the controversy surrounding media "effects." *Staff.*

### COMM 215: Social Media

(1 Unit)
An Examination of social media and the role in communication today. Students investigate social media elements, media and interpersonal communication theories, communication stratigies, and socio-cultural implications of social media. Topics include social media production and reproduction of cultural mores and values, consumption patterns of social media content, and implication of McLuhan's "the medium is the message" perspective.

### COMM 306: Public Relations

(1 Unit)
A theoretical and practical examination of the public relations field, including internal and external communications as well as media relations. Students occasionally gain practical experience by participating in a major campaign. *Staff.*

### COMM 330: Advertising

(1 Unit)

### COMM 351: Persuasion

(1 Unit)
A theoretical analysis of the process of influencing belief, attitude or behavior through appeals to reason, emotion and ethos. Students investigate experimental and rhetorical theories in the field and the ethical considerations of persuasion. *Staff.*

## Elective Units (3 Units)

Each Integrated Marketing Communication major must complete three (3) electives from the following list:

### COMM 309: Sports Marketing

(1Units)
This course will examine the history and contemporary application of sports marketing as a method to achieve goals. Emphasis will be given to how sports teams use sports marketing strategies, including marketing research, market segmentation, branding, sponsorships, licensing, global sports marketing, and public relations to achieve business objectives aimed at specific constituencies, including consumers, employees, and athletes.

### COMM 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

### E&M 220: Marketing Principles

(1 Unit)
Prerequisite: E&M 101 . PSYC 101 recommended.
An introduction to the role that product, price, promotion, and distribution play in marketing strategy and implementation. Addresses buyer behavior, market segmentation, and competititve positioning. Provides background needed for all 300-level marketing courses. *Yayla*

### E&M 320: Consumer Behavior

(1 Unit)
E&M 220 and one of the following: COMM 101, PSYC 101
Applies psychology and economics to analyze how marketers create value for customers, what motivates shoppers to buy, and how consumers process information and make decisions. Also addresses persuasion techniques, cross-cultural influences on consumer behavior, and the impact of corporate reputation on consumer choice. *Yayla*

### E&M 321: Marketing Research

(1 Unit)
Prerequisites: E&M 220 ; E&M 200 OR MATH 209 OR BOTH PSYC 204 & PSYC 306
Use of marketing data to inform managerial decision-making. Topics include defining research objectives, data sources for marketing, exploratory research methods, survey research design, observational research techniques, experimental design, sampling procedures, data collection and analysis, and communicating research findings. Hands-on computer work is an important part of the course. *Yayla*

### E&M 329: Marketing Strategy

(1 Unit)
Prerequisite: E&M 220. Additional prior courses in marketing are recommended.

Focuses on marketing's role in gaining a sustainable competitive advantage. Emphasis is on the application of key concepts learned in other courses to analyze case studies and participate in a marketing simulation game. Requires students to write case reports, work in groups, and make a project presentation. *Yayla*

## The Following Quantitative Cognate Must Be Completed (1 Unit)

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

### MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

### PSYC 204: Research Methods and Statistics I

(1 Unit)
Prerequisites: PSYC 101 with a grade of 2.0 or higher and a 200-level lecture-based course, or permission of instructor.
An introduction to the theory and practice of research methods in psychology with an emphasis on descriptive designs. Focuses on naturalistic, archival, and survey methodology with discussion of descriptive statistics, probability, Chi-square, z-scores, correlation, and multiple regression. Lecture and laboratory. Course normally taken during second year. *Christopher, Elischberger, Francis, Hill, Jechura, Wieth, Staff.*

### SOC 324: Quantitative Social Research

(1 Unit)
Prerequisite: SOC 101 and junior standing, or permission of instructor.
An overview of quantitative social research methods and statistics. Topics include problem formulation and connection between theories and research; research designs, measurement and sampling techniques; ethical issues in research; data processing and data analysis with discussion of descriptive statistics; hypothesis testing and chi-square tests of significance; correlation; and multiple regression models. Students design and carry out their own independent research projects in addition to an extensive application of SPSS in laboratory assignments using secondary data. *Staff.*

Approved courses could also be transferred from other institutions.

## In Addition:

COMM 289 and COMM 389 courses (Selected Topics) offered will be accepted as electives toward the major, as will courses taken during off-campus study program (for example, courses taken as part of The Philadelphia Center), if approved by the Communication Studies department. Student may complete Selected Topics courses and count them toward the major but may not complete the course more than once. In addition, Directed Studies (COMM 411, COMM 412) may be counted toward the major if they are approved by the department in advance and are taken within the Communication Studies Department (as COMM 411, or COMM 412).

# Sport Communication, B.A.

The Sport Communication major at Albion College takes students beyond scores and highlights. It requires students to view and analyze sports in new ways, critically examining the role of sports in society and preparing students for a range of careers in the sports industry.

# Requirements for Sport Communication Major (10 Units)

## COMM 101: Introduction to Human Communication

(1 Unit)
An introduction to the study of communication. Students investigate communication theory, models, symbols and signs, verbal and nonverbal communication, interpersonal communication, group communication, organizational communication, mass communication, communication ethics and new communication technologies. *Staff.*

## COMM 202: Communication in Interpersonal Contexts

(1 Unit)
The course examines the theory and research behind interpersonal communication. Explores communication processes in dyads, families, teams, and in organizational settings. Teaches skills to improve students' communication competence in both personal and professional environments. The course also covers self-awareness, self-disclosure, relational development, and conflict resolution. *Erlandson.*

## COMM 206: Event Marketing & Management

(1 Uint)
Event Management is a theoretical and practical study of events. While interdisciplinary in nature, event planning theories covered in this class will be within the framework of strategic communication. Students will learn the art of event planning through the creation and implementation of an event outline. Students will utilize qualitative and quantitative data in event evaluation. This class will contain an overview of a multitude of events, including nonprofit fundraisers, weddings, community events, corporate engagements, and private parties.

## COMM 209: Sport Communication

(1 Unit)
An examination of the role of communication in sports contexts. Students investigate communication theory and models and consider how communication in sports functions within a contemporary culture. Includes exploration of the media environment as well as culture in and around sport. *Boyan.*

## COMM 215: Social Media

(1 Unit)
An Examination of social media and the role in communication today. Students investigate social media elements, media and interpersonal communication theories, communication stratigies, and socio-cultural implications of social media. Topics include social media production and reproduction of cultural mores and values, consumption patterns of social media content, and implication of McLuhan's "the medium is the message" perspective.

## COMM 241: Public Speaking

(1 Unit)
A theoretical and practical study of speaking in public. Students are introduced to classical and contemporary critical standards of excellence in oral style and delivery, while they develop skills in the art of speaking effectively in informational and persuasive situations. *Staff.*

## COMM 300: Communication Research Methods

(1 Unit)
Prerequisites: COMM 101 and at least one 200-level communication studies course.
Provides an overview of the concepts and tools by which communication research is designed, conducted, interpreted, and critically evaluated. Aims to help students become knowledgeable consumers and producers of quantitative and qualitative communication research. *Hill.*

### COMM 303: Communications in Sports Organizations

(1 Unit)
Provides an understanding of organizational communication theories and practices as they relate to the creation, maintenance, and change of culture and practices in sports organizations. This course will examine the impact of internal and external communication environments and how sports organizations adapt their communication and culture in response. Students will practice application, analysis, and critical thinking about communication in sports organizations through research projects. *Staff.*

### COMM 309: Sports Marketing

(1Units)
This course will examine the history and contemporary application of sports marketing as a method to achieve goals. Emphasis will be given to how sports teams use sports marketing strategies, including marketing research, market segmentation, branding, sponsorships, licensing, global sports marketing, and public relations to achieve business objectives aimed at specific constituencies, including consumers, employees, and athletes.

## Students must also select one of the following courses:

### COMM 306: Public Relations

(1 Unit)
A theoretical and practical examination of the public relations field, including internal and external communications as well as media relations. Students occasionally gain practical experience by participating in a major campaign. *Staff.*

### COMM 330: Advertising

(1 Unit)

### COMM 351: Persuasion

(1 Unit)
A theoretical analysis of the process of influencing belief, attitude or behavior through appeals to reason, emotion and ethos. Students investigate experimental and rhetorical theories in the field and the ethical considerations of persuasion. *Staff.*

# Sport Communication, Minor

## Requirements for Sport Communication Minor (5 Units)

### COMM 101: Introduction to Human Communication

(1 Unit)
An introduction to the study of communication. Students investigate communication theory, models, symbols and signs, verbal and nonverbal communication, interpersonal communication, group communication, organizational communication, mass communication, communication ethics and new communication technologies. *Staff.*

### COMM 209: Sport Communication

(1 Unit)
An examination of the role of communication in sports contexts. Students investigate communication theory and models and consider how communication in sports functions within a contemporary culture. Includes exploration of the media environment as well as culture in and around sport. *Boyan.*

### COMM 241: Public Speaking

(1 Unit)
A theoretical and practical study of speaking in public. Students are introduced to classical and contemporary critical standards of excellence in oral style and delivery, while they develop skills in the art of speaking effectively in informational and persuasive situations. *Staff.*

### COMM 303: Communications in Sports Organizations

(1 Unit)
Provides an understanding of organizational communication theories and practices as they relate to the creation, maintenance, and change of culture and practices in sports organizations. This course will examine the impact of internal and external communication environments and how sports organizations adapt their communication and culture in response. Students will practice application, analysis, and critical thinking about communication in sports organizations through research projects. *Staff.*

### COMM 309: Sports Marketing

(1Units)
This course will examine the history and contemporary application of sports marketing as a method to achieve goals. Emphasis will be given to how sports teams use sports marketing strategies, including marketing research, market segmentation, branding, sponsorships, licensing, global sports marketing, and public relations to achieve business objectives aimed at specific constituencies, including consumers, employees, and athletes.

# Earth & Environment

# Faculty

**Carrie A. Menold**, chair and professor
B.S., University of Michigan; Ph.D., University of California, Los Angeles. Appointed 2006.

**Joe Lee-Cullin**, assistant professor;

A.A., Kirkwood Community College; B.S., Univeristy of Iowa; M.S., University of Iowa; Ph.D., Michigan State University. Appointed 2020.

**Madeline Marshall**, assistant professor.
B.A., Macalester College; Ph.D., The University of Chicago. Appointed 2019.

**Michael W. McRivette**, associate professor.
B.S., University of California, San Diego; Ph.D., University of California, Los Angeles. Appointed 2008.

**Thomas I. Wilch**, professor and Herbert H. and Grace A. Dow Trustees' Professor of the Sciences.
B.A., Macalester College; M.S., University of Maine; Ph.D., New Mexico Institute of Mining and Technology. Appointed 1998.

# Introduction

Geology is the study of the earth, the processes that shape it and the materials of which it is composed. Geology gives students an understanding of the world around them, an appreciation for the length and events of earth history, and the knowledge to help them make informed decisions about environmental concerns.

The Department of Earth & Environment provides undergraduate students intellectually engaging and challenging learning opportunities in geology through integrated classroom, laboratory, field, and research experiences. Our students learn to deal with transdisciplinary problems involving complicated systems with complex variables, a wide range of scales of both time and space, and often incomplete or ambiguous data sets. This is excellent preparation for many careers, including geology, environmental science, law, business, and medicine, as well as for informed citizenship.

Earth & Environment Department Website

# Career Opportunities

Albion College geology graduates are successful in obtaining interesting and rewarding jobs. Currently, there are numerous well-paying jobs with petroleum and mineral exploration companies as well as in the area of water resource and environmental management. Other geology graduates have been employed by numerous consulting firms; by research institutes; by state geological surveys and the U.S. Geological Survey; by universities and colleges as geology professors and by secondary schools as earth science teachers.

Over one-half of our graduates have chosen to continue studying geology or other disciplines, including business, law, medicine, and public policy, at major universities and have obtained master's or doctoral degrees before beginning their careers.

# Special Features

The department's facilities include six instructional laboratories, a GIS lab, individual faculty offices and research labs, a student research lab, a map room, and a rock and fossils preparation shop.

Three National Science Foundation grants to the department have established sophisticated geographic information systems (GIS), inductively coupled argon plasma (ICP) spectrometry and x-ray fluorescence (XRF) spectrometry laboratories. Another NSF grant has provided electronic mapping tools, including global positioning receivers and base stations, laser ranging equipment and an electronic total station for precise fieldwork.

The Dow Analytical Science Laboratory houses a JY ICP spectrometer with a Cetac 5000AT ultrasonic nebulizer, a Rigaku 2100 wavelength dispersive XRF spectrometer, a Fluxy automatic fluxer, a Sedigraph 5100 particle size analyzer, a Rigaku miniflex X-ray diffractometer, and a CEM Mars 5 microwave digestion system. This equipment supports analysis of a wide range of materials, including rocks and natural solutions, for most elements from trace

(parts per billion) to major (%) levels. The Geology Shop includes rock crushing and grinding equipment, rock saws and polishing equipment and a Buehler petrographic thin section machine. Students in both introductory and advanced courses use the equipment, and it supports advanced environmental and geological research projects.

Our other laboratories are also well-equipped and include: an Olympus research-grade petrographic microscope with heating/freezing stage and digital imaging systems; a Franz magnetic separator; new binocular and petrographic student microscopes (along with color digital video and photographic microscopy units and image analysis software); three stream tables; a 3-meter flume, wave tank, current velocity meters and data-logging water analysis sondes; exploration seismograph; resistivity apparatus; and a magnetometer. Department collections include over 6,000 rock and mineral specimens, over 10,000 fossil specimens and more than 2,000 specialized maps.

Many departmental maps, minerals, rocks and fossils are displayed throughout the science complex. The Mitchell Museum and the science complex atrium include the wave tank and additional fossil, rock and mineral displays. The hallways of the department also have exhibits of current faculty and student research as well as additional maps and specimens.

The computer laboratory for GIS and digital image analysis includes 16 workstations, two color scanners: a large format map and poster scanner and a desktop flatbed scanner, a color inkjet printer, a laser printer, and a link to the E-size printer/plotter in the nearby Dow Analytical Laboratory. Software for creating, manipulating and analyzing spatial data and images (maps, aerial photos and satellite imagery) includes the most recent versions of ArcGIS for Desktop Advanced, ArcPad, and ENVI.

Field study is important in geology, so the department maintains an active field program. Each spring students and faculty participate in a regional geology seminar and subsequent eight- to 14-day field trip; trips have been to the Pacific Northwest, Wisconsin, California, Louisiana, Great Britain, Iceland, Canada, Alaska, Hawaii, Arizona and New Mexico, New England, the Ozarks, the Northern Appalachians and the Smoky Mountains. Local field trips are sponsored by the student-run Geology Club. In addition, the Earth & Environment Department operates a biennial six-week summer field program in the Rocky Mountains of Wyoming. Students from Albion and many other colleges and universities attend this camp for training in geologic mapping and field research.

Research opportunities are available to all majors in their junior and senior years. Students may work on an individual laboratory or field problem within the scope of their background and present their results at professional meetings. Outstanding seniors are encouraged to complete honors theses. The Lawrence D. Taylor Undergraduate Geology Research Fund supports student research and travel to present at regional and national meetings. A local chapter of Sigma Gamma Epsilon, a national earth science honorary, is active on the Albion campus.

# Departmental Policy on Advanced Placement Credit

Students who earn a 4 or 5 on the Advanced Placement (AP) exam will receive one unit of credit from the Department of Earth & Environment. Students who receive AP credit for calculus, chemistry, computer science, and/or physics from the respective department may use the AP credit to replace equivalent requirements for majors and minors offered by the department. In most cases, these courses might replace a cognate course requirement. Students should consult with the department chair to verify how AP credit may be awarded.

# Student Learning Outcomes

**Geology Major**

Students will be able to:

1. Articulate fundamental concepts in core areas of geology, including plate tectonics, earth history, solid-earth composition/structure, and surface and atmospheric processes.

2. Articulate ideas effectively orally and in writing.
3. Use the scientific method to investigate geologic questions.
4. Employ field and laboratory skills to gather geologic data.
5. Interpret qualitative and quantitative data to answer geologic questions.
6. Integrate geologic concepts, methods, and data to solve geologic problems.
7. Achieve stated personal goals in further education or careers.

**Earth Science Major**

Students will be able to:

1. Articulate fundamental concepts in most core areas of geology, including plate tectonics, earth history, solid-earth composition/structure, and surface and atmospheric processes.
2. Articulate ideas effectively orally and in writing.
3. Use the scientific method to investigate geologic questions.
4. Employ field and laboratory skills to gather geologic data.
5. Interpret qualitative and quantitative data to answer geologic questions.
6. Integrate geologic concepts, methods, and data to solve geologic problems.
7. Achieve stated personal goals in further education or careers.

**Environmental Science Major**

Students will be able to:

1. Recognize the complicated ways in which humans are fundamentally interconnected with natural systems.

2. Describe how human population, resource use, and technology have impaired environmental sustainability at local, regional, and global scales.

3. Analyze how their personal actions and prospects relate to environmental sustainability and how different stakeholders will view environmental issues differently.

4. Evaluate how complex environmental problems may require changes in scientific understanding, technology, public policy, social relations, worldviews, or fundamental values.

5. Construct an integrated picture of a variety of environmental issues by drawing connections between courses in several science disciplines and hands-on experiences.

6. Appraise various environmental career opportunities available in the private sphere, industry, education, non-governmental organizations, and government agencies.

**Environmental Studies Major**

Students will be able to:

1. Recognize the complicated ways in which humans are fundamentally interconnected with natural systems.

2. Describe how human population, resource use, and technology have impaired environmental sustainability at local, regional, and global scales.

3. Analyze how their personal actions and prospects relate to environmental sustainability and how different stakeholders will view environmental issues differently.

4. Evaluate how complex environmental problems may require changes in scientific understanding, technology, public policy, social relations, worldviews, or fundamental values.

5. Construct an integrated picture of a variety of environmental issues by drawing connections between courses in **science, social science, and the humanities, as well as** hands-on experiences.

6. Appraise various environmental career opportunities available in the private sphere, industry, education, non-governmental organizations, and government agencies.

**Sustainability Studies Major**

Students will be able to:

1. Recognize the complicated ways in which humans are fundamentally interconnected with natural systems.

2. Describe how human population, resource use, and technology have impaired environmental sustainability at local, regional, and global scales.

3. Analyze how their personal actions and prospects relate to environmental sustainability and how different stakeholders will view environmental issues differently.

4. Evaluate how complex environmental problems may require changes in scientific understanding, technology, public policy, social relations, worldviews, or fundamental values.

5. Construct an integrated picture of a variety of environmental issues by drawing connections between courses in science, social science, and the humanities, as well as hands-on experiences.

6. Appraise various environmental career opportunities available in the private sphere, industry, education, non-governmental organizations, and government agencies.

7. Describe global dimensions of sustainability and other nations' approaches to sustainability, based on an international experience.

**Geology Minor**

Students will be able to:

1. Articulate fundamental concepts in some of the core areas of geology, including plate tectonics, earth history, solid-earth composition/structure, and surface and atmospheric processes.

2. Articulate ideas effectively orally and in writing.

3. Use the scientific method to investigate geologic questions.

4. Employ field and laboratory skills to gather geologic data.

5. Interpret qualitative and quantitative data to answer geologic questions.

**Environmental Geology Minor**

Students will be able to:

1. Articulate fundamental concepts of geology that relate to the surface and near-surface environment, including rock weathering and soil formation, slope failure and erosion processes, streams and groundwater systems, and landscape evolution.

2. Comprehensively summarize either chemical interactions of water with the solid Earth or glaciation and the Earth's climate system.

3. Articulate ideas effectively orally and in writing.

4. Use the scientific method to investigate environmental geology questions.

5. Employ field and laboratory skills to gather hydrologic and geomorphologic data.

6. Interpret qualitative and quantitative data to solve environmental geology problems.

**Paleontology Minor**

Students will be able to:

1. Articulate fundamental concepts in core areas of paleontology including Earth and life history, evolution, extinction, and surface processes and deposits.

2. Articulate ideas effectively orally and in writing.

3. Use the scientific method to investigate paleontological questions.

4. Employ field and laboratory skills to gather paleontological data.

5. Interpret qualitative and quantitative data to solve paleontological problems.

6. Apply a historical perspective to current biological questions.

**Geographic Information Systems (GIS) Minor**

Students will be able to:

1. Articulate fundamental concepts in core areas of geospatial sciences and geography, including geographic information systems (GIS), remote sensing, spatial analysis, digital mapmaking, and physical and cultural geography.

2. Apply fundamental geospatial science and geography concepts to other disciplines.

3. Articulate ideas effectively orally and in writing.

4. Critically analyze presentations of spatial data.

5. Employ field and GIS skills collect and create original spatial data.

6. Employ GIS and remote sensing skills to analyze spatial data to address geospatial problems and/or research questions.

7. Produce maps that effectively communicate the information they are intended to.

**Environmental Science Concentration**

Students will be able to:

1. Recognize the complicated ways in which humans are fundamentally interconnected with natural systems.

2. Evaluate how complex environmental problems may require changes in scientific understanding, technology, public policy, social relations, worldviews, or fundamental values.

3. Construct an integrated picture of a variety of environmental issues by drawing connections between courses in several science disciplines and hands-on experiences.

4. Appraise various environmental career opportunities available in the private sphere, industry, education, non-governmental organizations, and government agencies.

**Environmental Studies Concentration**

Students will be able to:

1. Recognize the complicated ways in which humans are fundamentally interconnected with natural systems.

2. Evaluate how complex environmental problems may require changes in scientific understanding, technology, public policy, social relations, worldviews, or fundamental values.

3. Construct an integrated picture of a variety of environmental issues by drawing connections between courses in science, social science, and the humanities, as well as hands-on experiences.

4. Appraise various environmental career opportunities available in the private sphere, industry, education, non-governmental organizations, and government agencies.

# Earth Science Minor, with Education Concentration

## Requirements for Minor in Earth Science with Education Concentration

### PHYS 105: Introductory Astronomy

(1 Unit)
Prerequisite: High school algebra.
A study of the night sky, planets, stars, galaxies, cosmology, and our place in the universe, along with discussion of observational techniques and space missions. Not intended for science and mathematics majors or minors or students who have taken physics or calculus in high school. Lecture and laboratory, with additional multiple observing sessions required. *Zellner.*

## Six Units in Geology, Including:

### GEOL 101: Introductory Geology

(1 Unit)
A survey course designed for liberal arts students covering many aspects of physical geology, the study of active earth processes. Labs illustrate lecture materials and the techniques used by geologists. One field trip. Complements the material covered in GEOL 103; either course can serve as an introductory course in geology. *Staff.*

### GEOL 103: Introduction to Earth History

(1 Unit)
A survey course designed for liberal arts students and covering many aspects of historical geology, the study of

evolving environments and life forms on earth. Labs utilize fossils, rock samples, maps and field trips to illustrate techniques used by historical geologists. Complements the material covered in GEOL 101; either course can serve as an introductory course in geology. *Staff.*

### GEOL 104: Earth Resources and the Environment

(1 Unit)
Without earth resources, civilization would not exist. Gold, diamonds, water, oil, building materials—all of our material resources ultimately are derived from the earth. This course examines the origin and geologic occurrence of these materials and the environmental implications of their utilization. No laboratory. *Staff.*

### GEOL 115: Oceans, Atmosphere and Climate

(1 Unit)
Describes the world's oceans and atmosphere and considers how they interact with one another, and with humans. Topics include the geological evolution of the ocean basins, ocean-atmosphere circulation patterns, ocean currents, climate and weather patterns, storms and weather fronts, paleo-oceanography and the history of climate, and the chemical composition of the oceans. Emphasizes the role of the oceans in mediating global climate, global change, global dispersal of pollution and other environmental concerns. No laboratory. Offered in alternate years. *T. Lincoln, Wilch.*

AND

- The completion of all other requirements as outlined in the section "Requirements for Minor in Geology."

## Additional Requirements

- Demonstrated mathematics proficiency at the MATH 125 level.
- Completion of Education Concentration

# Earth Science, B.A.

## Requirements for Major in Earth Science

The earth science major is intended for the student who begins the major in second semester of the sophomore year or later or is doing the major in addition to another major.

## Eight Units in Geology, Including:

Two courses from the following list, at least one of which must be GEOL 101 or 103

### GEOL 101: Introductory Geology

(1 Unit)
A survey course designed for liberal arts students covering many aspects of physical geology, the study of active earth processes. Labs illustrate lecture materials and the techniques used by geologists. One field trip. Complements the material covered in GEOL 103; either course can serve as an introductory course in geology. *Staff.*

### GEOL 103: Introduction to Earth History

(1 Unit)
A survey course designed for liberal arts students and covering many aspects of historical geology, the study of evolving environments and life forms on earth. Labs utilize fossils, rock samples, maps and field trips to illustrate techniques used by historical geologists. Complements the material covered in GEOL 101; either course can serve as an introductory course in geology. *Staff.*

## GEOL 104: Earth Resources and the Environment

(1 Unit)
Without earth resources, civilization would not exist. Gold, diamonds, water, oil, building materials—all of our material resources ultimately are derived from the earth. This course examines the origin and geologic occurrence of these materials and the environmental implications of their utilization. No laboratory. *Staff.*

## GEOL 106: Natural Disasters

(1 Unit)
A review of the natural disasters that affect humans and the environment. Emphasizes the causes and prediction of natural hazards, assessment of hazard vulnerability, and disaster mitigation and recovery through case studies of historical and recent natural disasters. Topics include earthquakes, volcanoes, landslides, extreme weather, climate change and floods. No laboratory. *Staff.*

## GEOL 115: Oceans, Atmosphere and Climate

(1 Unit)
Describes the world's oceans and atmosphere and considers how they interact with one another, and with humans. Topics include the geological evolution of the ocean basins, ocean-atmosphere circulation patterns, ocean currents, climate and weather patterns, storms and weather fronts, paleo-oceanography and the history of climate, and the chemical composition of the oceans. Emphasizes the role of the oceans in mediating global climate, global change, global dispersal of pollution and other environmental concerns. No laboratory. Offered in alternate years. *T. Lincoln, Wilch.*

**AND**

**EITHER**

## GEOL 201: Structural Geology

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
Study of stress-strain relationships and behavior of materials, with particular reference to recognition and interpretation of rock structures. Laboratory work includes methods of solving structural problems and the use of geologic maps and cross-sections to interpret sequences of events in complex structural regions. Offered in alternate years. *B. Lincoln.*

**OR**

## GEOL 203: Mineralogy

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
Crystallography, crystal chemistry, optical and physical properties, and the occurrence of rock-forming minerals, with particular emphasis on the silicate minerals. Laboratory emphasizes hand-specimen and optical identification of minerals using petrologic microscopes. Offered in alternate years. *Menold.*

**EITHER**

### GEOL 205: Sedimentation and Stratigraphy

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
An examination of the processes and principles that control the accumulation and lithification of sediments, based on examples of recent environments and ancient rock sections in many parts of the world. Laboratory emphasizes map-reading skills and methods for studying recent and ancient sediments and rocks. Offered in alternate years. *Bartels.*

**OR**

### GEOL 208: Geomorphology

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
Geologic processes operating at the earth's surface and the landforms they produce. Includes the study of soil formation, river processes, glaciers, wave action, wind, groundwater and their related landforms. Field trips. Laboratory includes analysis of aerial photographs, topographic maps and experiments with flume and wave tank. Offered in alternate years. *Wilch.*

- One 300-level elective
- Three other geology courses, two of which must be at the 200-level or higher

  These may not include

### GEOL 210: Regional Field Geology

(1/2 Unit)
Prerequisite: GEOL 101 or GEOL 103, and a major or minor in the department, or permission of instructor.
An in-depth investigation of selected geologic provinces consisting of a seminar course and an 8-14 day field trip. The field trip itself typically begins in early May following commencement. *Staff.*

- Summer field camp or a directed study

## One Cognate Course in Mathematics, Chemistry, Physics And/or Biology

may include:

### PHYS 105: Introductory Astronomy

(1 Unit)
Prerequisite: High school algebra.
A study of the night sky, planets, stars, galaxies, cosmology, and our place in the universe, along with discussion of observational techniques and space missions. Not intended for science and mathematics majors or minors or students who have taken physics or calculus in high school. Lecture and laboratory, with additional multiple observing sessions required. *Zellner.*

**OR**

### PHYS 206: Astrophysics I: Stars, Galaxies and Cosmology

(1 Unit)
Prerequisites: MATH 141 and/or a previous physics course, or permission of instructor.
Provides an understanding of stars and how they work, and examines our galaxy. Covers topics related to cosmology,

including our expanding universe. Intended for mathematics and science majors and minors and for students pursuing teacher certification in science. *Zellner*.

**OR**

- One of the courses listed under the geology major requirements above

## Requirements for All Students Majoring in Geology or Earth Science

- All students completing a major in geology or earth science must satisfy a field work requirement equivalent to one unit of study. This requirement may be fulfilled by summer research, internship or work experiences, academic year directed studies, completion of GEOL 210 or GEOL 314, other suitable field experiences approved by the faculty (such as field trips sponsored by GSA), or some combination of the above.
    - After completing three or four geology courses or at the end of their junior year, geology majors planning graduate study and/or a professional geology career are urged to attend either the Albion summer field camp in the Rocky Mountains or a similar summer geology field course offered by another college or university. This experience is required by most graduate schools before entering a graduate program and is required by many industries and institutions employing geologists.
- A maximum of one geographic information systems course (GEOL 111, GEOL 211 or GEOL 311) may be counted toward the major.
- Departmental Colloquia: All geology and earth science majors are required to attend departmental colloquia regularly and to participate once each semester for four semesters.
- The geology units and the required cognate courses must be taken for a numerical grade. Students considering a geology major are urged to complete the cognate units as early as possible in their Albion career.

# Earth Science, with Education Concentration, B.A.

## Requirements for Major in Earth Science with Education Concentration

- Completion of all other requirements as outlined below in the section "Requirements for All Students Majoring in Geology or Earth Science."
- Demonstrated mathematics proficiency at the MATH 125 level.
- Completion of Education Concentration

## Nine Units in Geology, Including:

The following and five other geology courses at the 200-level or higher (one must be at the 300-level), selected in consultation with, and approved by, the department.

### GEOL 101: Introductory Geology

(1 Unit)
A survey course designed for liberal arts students covering many aspects of physical geology, the study of active earth processes. Labs illustrate lecture materials and the techniques used by geologists. One field trip. Complements the material covered in GEOL 103; either course can serve as an introductory course in geology. *Staff.*

### GEOL 103: Introduction to Earth History

(1 Unit)
A survey course designed for liberal arts students and covering many aspects of historical geology, the study of evolving environments and life forms on earth. Labs utilize fossils, rock samples, maps and field trips to illustrate techniques used by historical geologists. Complements the material covered in GEOL 101; either course can serve as an introductory course in geology. *Staff.*

### GEOL 104: Earth Resources and the Environment

(1 Unit)
Without earth resources, civilization would not exist. Gold, diamonds, water, oil, building materials—all of our material resources ultimately are derived from the earth. This course examines the origin and geologic occurrence of these materials and the environmental implications of their utilization. No laboratory. *Staff.*

### GEOL 115: Oceans, Atmosphere and Climate

(1 Unit)
Describes the world's oceans and atmosphere and considers how they interact with one another, and with humans. Topics include the geological evolution of the ocean basins, ocean-atmosphere circulation patterns, ocean currents, climate and weather patterns, storms and weather fronts, paleo-oceanography and the history of climate, and the chemical composition of the oceans. Emphasizes the role of the oceans in mediating global climate, global change, global dispersal of pollution and other environmental concerns. No laboratory. Offered in alternate years. *T. Lincoln, Wilch.*

## These May Not Include:

### GEOL 210: Regional Field Geology

(1/2 Unit)
Prerequisite: GEOL 101 or GEOL 103, and a major or minor in the department, or permission of instructor.
An in-depth investigation of selected geologic provinces consisting of a seminar course and an 8-14 day field trip. The field trip itself typically begins in early May following commencement. *Staff.*

- Summer field camp or a directed study

## Two Cognate Courses Including:

### PHYS 105: Introductory Astronomy

(1 Unit)
Prerequisite: High school algebra.
A study of the night sky, planets, stars, galaxies, cosmology, and our place in the universe, along with discussion of observational techniques and space missions. Not intended for science and mathematics majors or minors or students who have taken physics or calculus in high school. Lecture and laboratory, with additional multiple observing sessions required. *Zellner.*

**AND**

- One course selected from those listed under the geology major requirements above

## Requirements for All Students Majoring in Geology or Earth Science

- All students completing a major in geology or earth science must satisfy a field work requirement equivalent to one unit of study. This requirement may be fulfilled by summer research, internship or work experiences, academic year directed studies, completion of GEOL 210 or GEOL 314, other suitable field experiences approved by the faculty (such as field trips sponsored by GSA), or some combination of the above.
    - After completing three or four geology courses or at the end of their junior year, geology majors planning graduate study and/or a professional geology career are urged to attend either the Albion summer field camp in the Rocky Mountains or a similar summer geology field course offered by another college or university. This experience is required by most graduate schools before entering a graduate program and is required by many industries and institutions employing geologists.
- A maximum of one geographic information systems course (GEOL 111, GEOL 211 or GEOL 311) may be counted toward the major.
- Departmental Colloquia: All geology and earth science majors are required to attend departmental colloquia regularly and to participate once each semester for four semesters.
- The geology units and the required cognate courses must be taken for a numerical grade. Students considering a geology major are urged to complete the cognate units as early as possible in their Albion career.

# Environmental Geology Minor

## Requirements for Minor in Environmental Geology

## Five Units in Geology, Including:

### GEOL 101: Introductory Geology

(1 Unit)
A survey course designed for liberal arts students covering many aspects of physical geology, the study of active earth processes. Labs illustrate lecture materials and the techniques used by geologists. One field trip. Complements the material covered in GEOL 103; either course can serve as an introductory course in geology. *Staff.*

### GEOL 302: Ground Water

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
A description of the hydrologic cycle with emphasis on quantifying water budgets and water flow in the shallow earth. Field techniques include stream gauging and well installation, surveying and slug testing. Analytical and numerical models are used to interpret pump test data and to understand water flow to pumping wells and the dispersal and remediation of contamination. Offered in alternate years. *Staff*

### GEOL 208: Geomorphology

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
Geologic processes operating at the earth's surface and the landforms they produce. Includes the study of soil formation, river processes, glaciers, wave action, wind, groundwater and their related landforms. Field trips. Laboratory includes analysis of aerial photographs, topographic maps and experiments with flume and wave tank. Offered in alternate years. *Wilch.*

## One Unit Selected From:

### GEOL 306: Glaciers and Climate Change

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
Study of the pace, causes, and impacts of climate change in the geologic record and in today's world. Special emphasis on the role of glaciation in climate change and the impact of glaciation and climate change on the Great Lakes area. Lecture and field trip offered in alternate years. Lecture, laboratory and field trips. Offered in alternate years. *Wilch.*

### GEOL 307: Environmental Geochemistry

(1 Unit)
Prerequisite: GEOL 203 or CHEM 121 .
The application of chemical principles to the study of the earth with emphasis on environmental geochemistry. Topics include the distribution of chemical elements within the earth, rock weathering, the chemistry of natural solutions, surface chemistry and the behavior of contaminants in the environment. Laboratories involve both field and laboratory techniques and rely heavily on state-of-the-art instrumentation, including optical emission and x-ray fluorescence spectroscopy and ion chromatography. Offered as needed. *T. Lincoln.*

## One Unit Selected From:

### GEOL 104: Earth Resources and the Environment

(1 Unit)
Without earth resources, civilization would not exist. Gold, diamonds, water, oil, building materials—all of our material resources ultimately are derived from the earth. This course examines the origin and geologic occurrence of these materials and the environmental implications of their utilization. No laboratory. *Staff.*

### GEOL 106: Natural Disasters

(1 Unit)
A review of the natural disasters that affect humans and the environment. Emphasizes the causes and prediction of natural hazards, assessment of hazard vulnerability, and disaster mitigation and recovery through case studies of historical and recent natural disasters. Topics include earthquakes, volcanoes, landslides, extreme weather, climate change and floods. No laboratory. *Staff.*

### GEOL 111: Geography and Geographic Information Systems

(1 Unit)
An introduction to the elementary principles, techniques and utility of geographic information systems (GIS) toward the study of world geography, as well as related concepts and techniques involved in creating and using digital maps. Shows how maps (particularly computer-generated maps) can help in displaying and analyzing geographic and other spatial data, and the use of these analyses in modeling cultural and natural systems. Some prior computer experience is helpful, but is not required. Lecture and laboratory. *McRivette.*

### GEOL 115: Oceans, Atmosphere and Climate

(1 Unit)
Describes the world's oceans and atmosphere and considers how they interact with one another, and with humans. Topics include the geological evolution of the ocean basins, ocean-atmosphere circulation patterns, ocean currents, climate and weather patterns, storms and weather fronts, paleo-oceanography and the history of climate, and the

chemical composition of the oceans. Emphasizes the role of the oceans in mediating global climate, global change, global dispersal of pollution and other environmental concerns. No laboratory. Offered in alternate years. *T. Lincoln, Wilch.*

### GEOL 211: Remote Sensing and Geographic Information Systems

(1 Unit)
Prerequisite: GEOL 111 recommended.
An introduction to the elementary principles, techniques and utility of remotely sensed imagery and image interpretation, especially when used in conjunction with Geographic Information Systems (GIS). Shows how digital maps created from, or utilizing, digital imagery from airplanes, space shuttles and satellites can help in displaying and analyzing spatial data, modeling processes and making decisions. Laboratory emphasizes the use of remote sensing and GIS in a variety of environmental applications. Lecture and laboratory. Offered in alternate years. *McRivette.*

### ENVN 102: Introduction to the Environment

(1 Unit)
Explores the interconnected web of earth's natural systems including the atmosphere, biological communities, oceans and continents, as well as humankind's interactions with and dependence on them. Major topics include global climate and problems of global warming and desertification; resources and problems of world hunger and population growth; and pollution and problems of ecosystem destruction. *Staff.*

**OR**

- A one-unit equivalent of approved independent research

### GEOL 412: Directed Study

(1 Unit)
*Staff.*

**OR**

### GEOL 411: Directed Study

(1/2 Unit)
*Staff.*

## Additional Requirements

- Completion of an approved field experience (e.g., a research experience or internship with a significant field component or GEOL 210 or GEOL 314).
- Departmental Colloquia: All environmental geology minors are required to attend departmental colloquia regularly and to present once each semester for two semesters.
- All courses for the minor must be taken for a numerical grade.
- Note: This minor may not be elected by geology majors.

# Environmental Science Concentration

## Requirements for Concentration in Environmental Science

Some environmental careers are practiced primarily in one field of science. Students interested in pursuing such careers should consider the option of a science major with an environmental science concentration. It is strongly advised that students talk with science faculty in choosing their option.

The following are required for the concentration:

## Core:

A major in biology, chemistry, geology, mathematics, mathematics/physics, or physics and six additional courses as described below:

- Four science courses in two sciences outside the student's major including two or three units in one science and one or two in another. Only two courses can be at the introductory level, which means they lack prerequisites. Courses are to be selected from the list below and in consultation with the concentration director and the student's major department. It is possible to substitute other upper-level science courses, depending on the interests of the student.
- One unit selected from the "Society and Culture" or "Language, Idea and Image" lists in the environmental studies major or one additional upper-level science course not in the student's major.

### BIOL 195: Ecology, Evolution and Biodiversity

(1 Unit)
Focuses on whole organisms and their evolutionary and ecological relationships. Evolutionary processes, biological diversity, conservation biology and human impacts on ecology and biodiversity are major themes. Skills introduced are hypothesis testing, experimental design, use of primary literature in writing assignments and basic statistics. Lecture and laboratory. *Staff.*

### BIOL 216: Vascular Plants

(1 Unit)
Prerequisite: BIOL 195.
Morphology, taxonomy and distribution of vascular plants. Representatives of local flora receive special attention in laboratory and field studies. Lecture and laboratory. *Staff*

### BIOL 225: Invertebrate Zoology

(1 Unit)
Prerequisite: BIOL 195.
Field-oriented course emphasizing evolution, classification, ecology, behavior and natural history of invertebrate animals. Class involves field trips and use of the Whitehouse Nature Center. Lecture and laboratory. *Cahill.*

### BIOL 227: Vertebrate Zoology

(1 Unit)
Prerequisite: BIOL 195.
Classification, behavior, ecology and evolution of the vertebrates. Mammals and birds are emphasized more than other groups. Lecture and laboratory. *Hallinger.*

### BIOL 237: Ecology

(1 Unit)
Prerequisite: BIOL 195.
A study of interactions between organisms and their environment including adaptation, competition, parasitism, population and community dynamics and the ecosystem concept. Class involves field trips and use of the Whitehouse Nature Center. Lecture and laboratory. *Lyons-Sobaski.*

## BIOL 332: Microbiology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor; CHEM 154 recommended.
Introduction to the microbial world. Explores the morphology, physiology, genetics and diversity of microorganisms. Stresses the relationships among microbes and other organisms, including humans. Lecture and laboratory. *Olapade.*

## BIOL 240: Conservation Biology

(1 Unit)
Prerequisite: BIOL 195.
Presents concepts and issues concerning the causes and consequences of the loss of biodiversity. Emphasizes the science of conservation biology including the evolutionary potential of populations and species, as well as the history of the field, international efforts to conserve species, and the current status of policies such as the U.S. Endangered Species Act. Includes a conservation-related outreach project. *Lyons-Sobaski.*

## BIOL 365: Environmental Microbiology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
Microbes in action: bioremediation, biodegradation, cycling of nutrients and energy flow, biopesticides and phytopathogens, spread of antibiotic resistance, molecular ecology of infectious diseases, microbial symbionts and extremophiles. Explores these and other topics through discussions, field trips and experimental work. Lecture and laboratory. Offered in alternate years. *Olapade.*

## CHEM 152: Principles of Chemistry

(1 Unit)
Basic principles of stoichiometry, atomic and molecular structure, equilibrium, thermodynamics and kinetics. Thematic content will be used to explain how the foundational principles of chemistry can be used to explain the world around us. Topical applications and issues will vary with instructor. *Bieler, Harris, Lewis, McCaffrey, Metz, Rohlman, Streu.*

## CHEM 154: Organic Structure and Reactivity

(1 Unit)
Prerequisite: CHEM 152
This course builds on the atomic and molecular foundation developed in CHEM 152. Student are introduced to reactivity and mechanistic details of organic acid/base chemistry as well as model organic reactions. Quantitative reaction concepts necessary for organic chemistry are emphasized including: stoichiometry, thermochemistry, kinetic theory, thermodynamics, and dynamic equilibrium. Lecture and laboratory. *Harris, McCaffrey, Streu*

## CHEM 200: Chemistry and Social Problems

(1 Unit)
Prerequisite: Junior/senior standing.

An examination of selected, important social problems which have a technological basis. Discussions focus upon the economic, political and ethical dimensions of the problems, as well as the science and technology involved, and include problems such as the greenhouse effect and global warming, chlorofluorocarbons and the stratospheric ozone layer, chemical and radioactive waste disposal, and the use of pesticides. Risk/benefit analysis and the connection between chemical exposure and biological harm are important features of the discussions. Laboratory work involves the analysis of water samples for trace metals and organic contaminants, using state of the art instrumentation, and will include attempts to assess the validity of the analytical results. Intended for non-science majors as well as science majors. *Lewis.*

## CHEM 206: Chemical Analysis

(1 Unit)
Prerequisites: CHEM 152 or CHEM 154 .
Laboratory course emphasizing the collection, analysis and interpretation of quantitative data, using both traditional and instrumental techniques. *Bieler, Lewis, Metz.*

## CHEM 212: Organic Reactions and Mechanism

(1 Unit)
Prerequisite: CHEM 154.
A continued survey of the mechanisms and reactions of organic molecules focusing on aromatic and carbonyl compounds, and the application of organic reactions toward organic synthesis. Laboratory involves team-designed organic syntheses of biologically relevant molecules and/or synthetic methodology. *Harris, McCaffrey.*

## CHEM 327: Advanced Physical and Analytical Chemistry Laboratory

(1 Unit)
Prerequisite: CHEM 206 and CHEM 301. Prerequisite or corequisite: CHEM 340.
An exploration of various areas of physical chemistry and advanced problems in analytical chemistry including thermodynamics, kinetics, spectroscopy, x-ray diffraction and quantum mechanics. In carrying out these experiments, students use UV/Vis, fluorescence, ICP, IR, and x-ray fluorescence spectrometers and gain experience with electroanalytical methods, vacuum lines, lasers and x-ray diffraction. Two four-hour laboratories per week. *Bieler, Lewis, Metz.*

## CHEM 337: Biochemistry

(1 Unit)
Prerequisite: CHEM 212.
An in-depth study of biochemical structure, catalysis, metabolism and cellular regulation. Understanding living systems through molecular and chemical models. Areas of emphasis include macromolecular structure, enzyme mechanisms and kinetics, metabolic mechanisms and regulation, genomics, and proteomics. Same as BIOL 337. *Rohlman, Streu.*

## GEOL 101: Introductory Geology

(1 Unit)
A survey course designed for liberal arts students covering many aspects of physical geology, the study of active earth processes. Labs illustrate lecture materials and the techniques used by geologists. One field trip. Complements the material covered in GEOL 103; either course can serve as an introductory course in geology. *Staff.*

## GEOL 302: Ground Water

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
A description of the hydrologic cycle with emphasis on quantifying water budgets and water flow in the shallow earth. Field techniques include stream gauging and well installation, surveying and slug testing. Analytical and numerical models are used to interpret pump test data and to understand water flow to pumping wells and the dispersal and remediation of contamination. Offered in alternate years. *Staff*

## GEOL 205: Sedimentation and Stratigraphy

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
An examination of the processes and principles that control the accumulation and lithification of sediments, based on examples of recent environments and ancient rock sections in many parts of the world. Laboratory emphasizes map-reading skills and methods for studying recent and ancient sediments and rocks. Offered in alternate years. *Bartels.*

## GEOL 208: Geomorphology

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
Geologic processes operating at the earth's surface and the landforms they produce. Includes the study of soil formation, river processes, glaciers, wave action, wind, groundwater and their related landforms. Field trips. Laboratory includes analysis of aerial photographs, topographic maps and experiments with flume and wave tank. Offered in alternate years. *Wilch.*

## GEOL 211: Remote Sensing and Geographic Information Systems

(1 Unit)
Prerequisite: GEOL 111 recommended.
An introduction to the elementary principles, techniques and utility of remotely sensed imagery and image interpretation, especially when used in conjunction with Geographic Information Systems (GIS). Shows how digital maps created from, or utilizing, digital imagery from airplanes, space shuttles and satellites can help in displaying and analyzing spatial data, modeling processes and making decisions. Laboratory emphasizes the use of remote sensing and GIS in a variety of environmental applications. Lecture and laboratory. Offered in alternate years. *McRivette.*

- GEOL 216

## GEOL 306: Glaciers and Climate Change

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
Study of the pace, causes, and impacts of climate change in the geologic record and in today's world. Special emphasis on the role of glaciation in climate change and the impact of glaciation and climate change on the Great Lakes area. Lecture and field trip offered in alternate years. Lecture, laboratory and field trips. Offered in alternate years. *Wilch.*

## GEOL 307: Environmental Geochemistry

(1 Unit)
Prerequisite: GEOL 203 or CHEM 121 .
The application of chemical principles to the study of the earth with emphasis on environmental geochemistry. Topics include the distribution of chemical elements within the earth, rock weathering, the chemistry of natural solutions, surface chemistry and the behavior of contaminants in the environment. Laboratories involve both field and laboratory

techniques and rely heavily on state-of-the-art instrumentation, including optical emission and x-ray fluorescence spectroscopy and ion chromatography. Offered as needed. *T. Lincoln.*

## GEOL 311: Advanced Geographic Information Systems

(1 Unit)
Prerequisite: GEOL 111 or permission of instructor.
The study of the more advanced capabilities of Geographic Information Systems (GIS). Emphasizes spatial modeling and analysis using GIS software such as ArcView GIS. Topics include map algebra, point pattern analysis, network analysis, grid analysis and 3-D surface analysis. Students learn how to use these and other GIS tools for decision-making, model building and the effective use of maps. Lecture and laboratory. Offered in alternate years. *McRivette.*

## MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

## MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## CS 171: Introduction to Computer Science I

(1 Unit)
Prerequisite: MATH 125 (or equivalent) or permission of instructor.

Designed to be the first computer science course taken by students in mathematics and computer science. Topics include fundamentals of computation and algorithmic problem-solving, data types, control structures, the object-oriented programming paradigm and applications. Introduces a high-level programming language such as Java or Python. *Reimann.*

## CS 173: Introduction to Computer Science II

(1 Unit)
Prerequisite: CS 171.
A continuation of CS 171. Emphasizes advanced object-oriented programming (interfaces, multiple inheritance, reflections), abstract data types (stacks, queues, lists, strings, trees, graphics, etc.) and analysis of algorithms. Other topics include recursion, searching and sorting, simulation and an introduction to some of the advanced areas of computer science, e.g., computer organization, artificial intelligence and user interfaces. Students refine their programming skills in a high-level programming language such as Java or Python. Laboratory. *Reimann.*

## PHYS 115: General Physics

(1 Unit)
Prerequisite: High school algebra. First-year students need permission of instructor.
First semester of an algebra-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Includes analytical, historical and philosophical aspects. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

## PHYS 116: General Physics

(1 Unit)
Prerequisite: PHYS 115.
Second semester of an algebra-based survey of general physics. Topics include electricity and magnetism, light and optics, and atomic and nuclear physics. Includes analytical, historical and philosophical aspects. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff*

## PHYS 167: Analytical Physics I

(1 Unit)
Corequisite: MATH 141, or permission of instructor.
First semester of a calculus-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

## PHYS 168: Analytical Physics II

(1 Unit)
Prerequisite: PHYS 167. Corequisite: MATH 143 or permission of instructor.
Second semester of a calculus-based survey of general physics. Topics include electricity and magnetism, light and optics, and select topics in modern physics. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

## ENVN 220: Economics, Politics, and Environmental Policy

(1 Unit)
Examines decisions affecting environmental quality made by government, businesses and individuals; economic

analysis relevant to such decisions; the policy-making process; and dispute resolution techniques that may be useful in conflicts over environmental issues. Focuses on current national and local environmental policies, with comparisons to practices in other countries. *Saltzman.*

## Experiential Requirements:

- Attendance at a series of seminars each semester. In these, students who completed internships the previous semester will report on them, and other items of general interest, such as graduate schools and careers, will be discussed.
- An environmental research project, service project or internship. Students should have prior approval of the concentration director, and must make a presentation in the seminar and submit a paper summarizing the experience.

# Environmental Science, B.A.

## Requirements for Major in Environmental Science

The ten-unit environmental science major provides broad exposure to environmental sciences at the introductory level, focused work in science at the upper level and a set of cognates designed to show the social and humanistic context in which scientists work.

## Core:

Five units of science and mathematics, consisting of:

### BIOL 195: Ecology, Evolution and Biodiversity

(1 Unit)
Focuses on whole organisms and their evolutionary and ecological relationships. Evolutionary processes, biological diversity, conservation biology and human impacts on ecology and biodiversity are major themes. Skills introduced are hypothesis testing, experimental design, use of primary literature in writing assignments and basic statistics. Lecture and laboratory. *Staff.*

### CHEM 152: Principles of Chemistry

(1 Unit)
Basic principles of stoichiometry, atomic and molecular structure, equilibrium, thermodynamics and kinetics. Thematic content will be used to explain how the foundational principles of chemistry can be used to explain the world around us. Topical applications and issues will vary with instructor. *Bieler, Harris, Lewis, McCaffrey, Metz, Rohlman, Streu.*

### GEOL 101: Introductory Geology

(1 Unit)
A survey course designed for liberal arts students covering many aspects of physical geology, the study of active earth processes. Labs illustrate lecture materials and the techniques used by geologists. One field trip. Complements the material covered in GEOL 103; either course can serve as an introductory course in geology. *Staff.*

### GEOL 111: Geography and Geographic Information Systems

(1 Unit)
An introduction to the elementary principles, techniques and utility of geographic information systems (GIS) toward the study of world geography, as well as related concepts and techniques involved in creating and using digital maps. Shows how maps (particularly computer-generated maps) can help in displaying and analyzing geographic and other spatial data, and the use of these analyses in modeling cultural and natural systems. Some prior computer experience is helpful, but is not required. Lecture and laboratory. *McRivette.*

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

OR

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

## Science Electives:

Five units of focused work in science. Courses should have a central theme such as (but not limited to) habitat protection, modeling in environmental science, or water resources, and should be selected in consultation with a science faculty adviser and approved by the CSE director. Courses must be at the 200-level or higher, no more than three courses can be in one department, and at least one 300-level course must be included. Before beginning the study of theme, the student must secure the CSE director's approval of the proposed five-course sequence. This approval must be granted no later than mid-semester of the second semester of the student's sophomore year. A copy of the approved program and any subsequently approved changes are to be filed with the registrar after being signed by the CSE director.

## Cognate Courses:

Two and one-half units,

### ENVN 201: Ecology and Environmental Field Trip

(1/2 Unit)
Prerequisites: Membership in the Center for Sustainability of the Environment and permission of the instructor.

Demonstrates, in seminars and a one-two week field trip to a selected region of the United States, how ecosystems have been shaped by the interplay of biological, geological and human history and are thus both adapted to, and susceptible to changes in, modern landscape, climate and human practices. Examines environmental issues of both local and national significance related to these ecosystems. *Staff.*

### ENVN 220: Economics, Politics, and Environmental Policy

(1 Unit)
Examines decisions affecting environmental quality made by government, businesses and individuals; economic analysis relevant to such decisions; the policy-making process; and dispute resolution techniques that may be useful in conflicts over environmental issues. Focuses on current national and local environmental policies, with comparisons to practices in other countries. *Saltzman.*

**AND**

- One additional cognate selected from the "Society and Culture" or "Language, Idea and Image" lists in the environmental studies major.

## Experiential Requirements:

- Attendance at a series of seminars each semester. In these, students who completed internships the previous semester will report on them, and other items of general interest, such as graduate schools and careers, will be discussed.
- An environmental research project, service project or internship. Students should have prior approval of the CSE director, and must make a presentation in the seminar and submit a paper summarizing the experience.

# Environmental Studies Concentration

## Requirements for Concentration in Environmental Studies

The environmental studies concentration is designed for students who have an interest in environmental issues and plan careers in related fields. Due to the varying interests and backgrounds of the students who choose this option, the choice of courses for this concentration is more open than in the environmental science concentration. Participating students may pursue a major in any field. Students who complete this concentration might, for example, enter science journalism or work for environmental advocacy groups.

The following are required for the concentration:

### ENVN 102: Introduction to the Environment

(1 Unit)
Explores the interconnected web of earth's natural systems including the atmosphere, biological communities, oceans and continents, as well as humankind's interactions with and dependence on them. Major topics include global climate and problems of global warming and desertification; resources and problems of world hunger and population growth; and pollution and problems of ecosystem destruction. *Staff.*

### ENVN 220: Economics, Politics, and Environmental Policy

(1 Unit)
Examines decisions affecting environmental quality made by government, businesses and individuals; economic analysis relevant to such decisions; the policy-making process; and dispute resolution techniques that may be useful in

conflicts over environmental issues. Focuses on current national and local environmental policies, with comparisons to practices in other countries. *Saltzman.*

## Two Skills Courses Selected from the Following:

### E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

### PLSC 302: Public Policy, Interest Groups, and the American Welfare State

(1 Unit)
Prerequisites: Sophomore standing, PLSC 100 and PLSC 101.
This seminar analyzes the United States and the development of a robust middle-class welfare state: i.e., the "hidden" welfare state. While US centric, the seminar does not ignore a comparative analysis of other types of welfare states. The seminar analyzes key scholarship on contemporary state theory and American political development (APD) and engages broad questions about public policy, state formation, bureaucratic development, and the rise and fall of the New Deal/Administrative State (1932-1980). Emphasis will be on the fundamental role that interest group liberalism (IGL) has on the public policy arenas of: race relations, civil rights & civil liberties, healthcare, education, urban affairs, rural politics, and the way that IGL has configured law, legislation, and liberal democratic structures in the USA are the primary areas for analysis. The seminar will provide an opportunity for students that wish to in a purposely cross-disciplinary approach: an approach that draws heavily on scholarship in politics, history, and political sociology. *Staff*

## No More than One Lab Science Course Selected from the Following:

(this option not available for science majors)

### BIOL 195: Ecology, Evolution and Biodiversity

(1 Unit)
Focuses on whole organisms and their evolutionary and ecological relationships. Evolutionary processes, biological diversity, conservation biology and human impacts on ecology and biodiversity are major themes. Skills introduced are hypothesis testing, experimental design, use of primary literature in writing assignments and basic statistics. Lecture and laboratory. *Staff.*

### GEOL 101: Introductory Geology

(1 Unit)
A survey course designed for liberal arts students covering many aspects of physical geology, the study of active earth processes. Labs illustrate lecture materials and the techniques used by geologists. One field trip. Complements the material covered in GEOL 103; either course can serve as an introductory course in geology. *Staff.*

## Note

Two courses that deal explicitly with environmental issues, selected in consultation with the director.

One course in the student's major that is given an environmental focus by completion of an environmental paper, project or activity within the existing structure of the course. Normally these will be at the 200-level or higher. This work will be done in consultation with the director and the course instructor.

## Experiential requirements:

- Attendance at a series of seminars each semester. In these, students who completed internships the previous semester will report on them, and other items of general interest, such as graduate schools and careers, will be discussed.
- An environmental research project, service project or internship. Students should have prior approval of the concentration director, and must make a presentation in the seminar and submit a paper summarizing the experience.

# Environmental Studies, B.A.

## Requirements for Major in Environmental Studies

The ten-unit environmental studies major provides a deep understanding of the complex relationships among natural and social systems, as well as a proficiency in the analytical, rhetorical and creative skills necessary to perceive the wonders of the natural and human worlds and to solve the environmental challenges we face in the twenty-first century.

## Core:

Four units of required foundation courses consisting of:

### ANTH 105: An Introduction to Anthropology

(1 Unit)
What does it mean to be "human"? How can we understand human variation and change? This course provides a basic introduction to anthropology, with an emphasis on cultural anthropology. It also explores archaeology, biological anthropology, and linguistics. *Chase, Harnish, Webb.*

### ENVN 101: Fundamentals of Environmental Studies

(1 Unit)
A theoretical and practical introduction to the interdisciplinary field of environmental studies. Cultivates both a broad

understanding of ecological principles and the creative capacity to imagine and enact individual and social change that takes those principles into account. *Christiansen, White.*

### BIOL 195: Ecology, Evolution and Biodiversity

(1 Unit)
Focuses on whole organisms and their evolutionary and ecological relationships. Evolutionary processes, biological diversity, conservation biology and human impacts on ecology and biodiversity are major themes. Skills introduced are hypothesis testing, experimental design, use of primary literature in writing assignments and basic statistics. Lecture and laboratory. *Staff.*

### GEOL 101: Introductory Geology

(1 Unit)
A survey course designed for liberal arts students covering many aspects of physical geology, the study of active earth processes. Labs illustrate lecture materials and the techniques used by geologists. One field trip. Complements the material covered in GEOL 103; either course can serve as an introductory course in geology. *Staff.*

## Categories of Emphasis:

Six units total from the following three categories with at least one but no more than three courses in each category. If students choose to take three courses from a single category, at least two courses must be at the 200-level.

## Earth Systems

### BIOL 237: Ecology

(1 Unit)
Prerequisite: BIOL 195.
A study of interactions between organisms and their environment including adaptation, competition, parasitism, population and community dynamics and the ecosystem concept. Class involves field trips and use of the Whitehouse Nature Center. Lecture and laboratory. *Lyons-Sobaski.*

### BIOL 240: Conservation Biology

(1 Unit)
Prerequisite: BIOL 195.
Presents concepts and issues concerning the causes and consequences of the loss of biodiversity. Emphasizes the science of conservation biology including the evolutionary potential of populations and species, as well as the history of the field, international efforts to conserve species, and the current status of policies such as the U.S. Endangered Species Act. Includes a conservation-related outreach project. *Lyons-Sobaski.*

### GEOL 103: Introduction to Earth History

(1 Unit)
A survey course designed for liberal arts students and covering many aspects of historical geology, the study of evolving environments and life forms on earth. Labs utilize fossils, rock samples, maps and field trips to illustrate techniques used by historical geologists. Complements the material covered in GEOL 101; either course can serve as an introductory course in geology. *Staff.*

## GEOL 104: Earth Resources and the Environment

(1 Unit)
Without earth resources, civilization would not exist. Gold, diamonds, water, oil, building materials—all of our material resources ultimately are derived from the earth. This course examines the origin and geologic occurrence of these materials and the environmental implications of their utilization. No laboratory. *Staff.*

## GEOL 106: Natural Disasters

(1 Unit)
A review of the natural disasters that affect humans and the environment. Emphasizes the causes and prediction of natural hazards, assessment of hazard vulnerability, and disaster mitigation and recovery through case studies of historical and recent natural disasters. Topics include earthquakes, volcanoes, landslides, extreme weather, climate change and floods. No laboratory. *Staff.*

## GEOL 111: Geography and Geographic Information Systems

(1 Unit)
An introduction to the elementary principles, techniques and utility of geographic information systems (GIS) toward the study of world geography, as well as related concepts and techniques involved in creating and using digital maps. Shows how maps (particularly computer-generated maps) can help in displaying and analyzing geographic and other spatial data, and the use of these analyses in modeling cultural and natural systems. Some prior computer experience is helpful, but is not required. Lecture and laboratory. *McRivette.*

## GEOL 115: Oceans, Atmosphere and Climate

(1 Unit)
Describes the world's oceans and atmosphere and considers how they interact with one another, and with humans. Topics include the geological evolution of the ocean basins, ocean-atmosphere circulation patterns, ocean currents, climate and weather patterns, storms and weather fronts, paleo-oceanography and the history of climate, and the chemical composition of the oceans. Emphasizes the role of the oceans in mediating global climate, global change, global dispersal of pollution and other environmental concerns. No laboratory. Offered in alternate years. *T. Lincoln, Wilch.*

## GEOL 211: Remote Sensing and Geographic Information Systems

(1 Unit)
Prerequisite: GEOL 111 recommended.
An introduction to the elementary principles, techniques and utility of remotely sensed imagery and image interpretation, especially when used in conjunction with Geographic Information Systems (GIS). Shows how digital maps created from, or utilizing, digital imagery from airplanes, space shuttles and satellites can help in displaying and analyzing spatial data, modeling processes and making decisions. Laboratory emphasizes the use of remote sensing and GIS in a variety of environmental applications. Lecture and laboratory. Offered in alternate years. *McRivette.*

## GEOL 306: Glaciers and Climate Change

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
Study of the pace, causes, and impacts of climate change in the geologic record and in today's world. Special emphasis on the role of glaciation in climate change and the impact of glaciation and climate change on the Great Lakes area. Lecture and field trip offered in alternate years. Lecture, laboratory and field trips. Offered in alternate years. *Wilch.*

### GEOL 311: Advanced Geographic Information Systems

(1 Unit)
Prerequisite: GEOL 111 or permission of instructor.
The study of the more advanced capabilities of Geographic Information Systems (GIS). Emphasizes spatial modeling and analysis using GIS software such as ArcView GIS. Topics include map algebra, point pattern analysis, network analysis, grid analysis and 3-D surface analysis. Students learn how to use these and other GIS tools for decision-making, model building and the effective use of maps. Lecture and laboratory. Offered in alternate years. *McRivette.*

### PHYS 102: The Physics of Urban and Environmental Problems

(1 Unit)
Prerequisite: High school algebra.
The physics of modern urban and environmental problems with respect to their causes, effects and possible cures. Topics include transportation, energy generation and transmission, pollution and resources. Not intended for science majors. Offered in alternate years. *Zellner.*

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

## Language, Idea and Image

### ART 121: Drawing

(1 Unit)
Designed to introduce the beginning student to a variety of drawing media, subject matter and drawing concepts. May be taken concurrently with Art 102. *Dixon.*

### ART 241: Photography I

(1 Unit)
An introduction to the technical and aesthetic aspects of photography and its cultural significance: photo literacy, compositional elements, and the creation and critique of work through the use of emerging technology in the field of photography. *Feagin.*

### ARTH 311: Art as Political Action

(1 Unit)
Examines art that invites or encourages social awareness and/or action. Includes studies of "high art" media, such as photography, painting and sculpture, and non-traditional art forms including performance art, public murals, crafts, environmental art and others. Thematically arranged around politicized issues such as race, rape and domestic violence, concepts of the body, pacifism and war, poverty, illness and AIDS. The course begins with political movements that relied heavily on visual images to achieve their purposes. *Wickre.*

### ARTH 315: Earth, Art, and the Environment

(1 Unit)
Examines American (U.S.) and European art and architecture that interacts with the environment and calls attention to the benefits and consequences of human interaction with the environment in a national and global context. Focuses on art, architecture and design projects produced from 1960 to the present and materials that set the context for artistic concerns about the environment beginning in the nineteenth century. *Wickre.*

### COMM 311: Environmental Communication

(1 Unit)
Prerequisite: COMM 101
A study of how the natural environment is socially constructed through its representation in word and image. After introducing students to fundamental environmental terminology, the course will consider a number of key environmental communicators, their ideological positions, and how they shape their messages. This will be followed by a discussion of audiences and environmental communication ethics. Offered occasionally. *Staff.*

### ENGL 384: Idea of Nature, Nature of Ideas

(1 Unit)
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.
An interdisciplinary exploration of the relationship between the imagination and the natural world in the works of key American writers. Draws on the creative and critical tools of multiple disciplines—including literary studies, creative writing, and natural history. Typical authors include H.D. Thoreau, Annie Dillard, James Galvin, Bernd Heinrich, and Mary Oliver. *Christensen.*

### ENGL 358: Literature of the Great Lakes

(1 Unit)
Prerequisites: Sophomore standing or higher or permission of instructor.
A bioregional exploration of representative poems, novels, and essays written by Great Lakes authors. Typical authors include Richard Powers, Bonnie Jo Campbell, Lorine Niedecker, James Wright, Joseph Boyden, and Holling Clancy Holling. *Christensen.*

### PHIL 335: Philosophical Issues in the Law

(1 Unit)
Designed both for students interested in philosophy and for those interested in political science, history, economics, or sociology. Provides an explanation of legal concepts and institutions from the philosophical perspective. Develops in the student: (1) an understanding of some of the major philosophical issues in the law and (2) the ability to reflect critically upon them. *Madhok.*

## Society and Culture

- ANTH 220

### ANTH 240: Ancient Civilizations

(1 Unit)
Prerequisite: ANTH 105 or permission of instructor.
Although the human species has been on the planet in its present form for at least 100,000 years, complexly organized societies with cities, governments and organized religions did not emerge until the last 5,000. This phenomenon took place independently throughout the globe, and while some ancient civilizations collapsed, others became the foundations upon which the modern world was constructed. Why is this so? Through a comparative analysis of Mesopotamian, Egyptian, Indus, Maya, Aztec and Incan societies, among others, students will learn to analyze the factors that have led to the emergence and transformation of civilizations. *Chase.*

## ANTH 271: Nature and Society: An Introduction to Ecological Anthropology

(1 Unit)
Prerequisite: ANTH 105 or SOC 101 or permission of instructor.
Provides an understanding of the diverse and ever-changing relationships between people and their natural environments. Considers the historical foundations of ecological anthropology and the human dimensions of contemporary environmental issues ranging from deforestation and desertification to ecotourism and environmental justice. Through cross-cultural case studies, students learn how human perceptions of and interactions with the environment are conditioned by social variables like gender, race, politics, economics and religion/worldview. *Harnish.*

## E&M 273: Environmental and Natural Resource Economics

(1 Unit)
Prerequisite: E&M 101.
Economic theory is used to examine environmental and natural resource problems and policies. *Staff.*

## ENVN 220: Economics, Politics, and Environmental Policy

(1 Unit)
Examines decisions affecting environmental quality made by government, businesses and individuals; economic analysis relevant to such decisions; the policy-making process; and dispute resolution techniques that may be useful in conflicts over environmental issues. Focuses on current national and local environmental policies, with comparisons to practices in other countries. *Saltzman.*

## HIST 337: Environmental History

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Focus on the historical roots of contemporary environmental problems. Analysis of both the destructive and the conservation sides of the American experience. Native American perspectives, women and nature, technology, Thoreau, John Muir, energy crisis, ecology as the subversive science, a land ethic, Rachel Carson's Silent Spring, and environmental impacts (DDT, Love Canal, atomic testing, PBB, dioxin, acid rain) are stressed. Concentration on America, but within a global frame of reference. Interdisciplinary emphasis that invites students from a variety of majors, particularly those in the sciences and those treating public policy issues. Special opportunities for those who enjoy the out-of-doors. *Staff*

## HIST 382: STEM in East Asian History

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.

Explores the broad impacts of science, technology, environment, and medicine across East Asia from premodern periods to the present-day. We will investigate the ways in which the human body, space and place, and material-environmental interactions (ranging from manipulations of waterways to climate change) transformed East Asian and global histories. The course will focus on multidisciplinary, comparative approaches and topics including gendered forms of medicine and technology, regional and transnational environmental issues (natural, man-made, or both), and information flows between Asia and the world. *Ho.*

## INTN 130: Introduction to International Studies

(1 Unit)
Introduces concepts of international studies with historical examples. Students are required to observe and analyze developments within a certain region, area, country or organization throughout the semester. *Yoshii.*

## PHIL 206: Contemporary Moral Problems

(1 Unit)
An introduction to a broad range of philosophical subjects and methodologies through an examination and analysis of contemporary moral problems—e.g., abortion, euthanasia, genetic engineering, sexual morality, gender and racial discrimination, corporate crime, pornography and censorship, the death penalty, ecology, world hunger, etc. *Madhok.*

## PHIL 220: Philosophy and History of Science

(1 Unit)
Considers the following questions: What is science? What is scientific explanation? What are the ontological commitments of a scientist? To what extent does the culture of a scientific community affect results of that community? *Kirby.*

## PHIL 301: Environmental Ethics

(1 Unit)
Examines theoretical and practical perspectives on ethical issues in relation to the environment. The theoretical issues range from whether we should assign moral value to species other than the human (and if so, on the basis of what criteria) to whether we have moral obligations to preserve the environment for future generations (and if so, what this would imply for the present generations). The practical issues range from creating incentives for restricting population growth without abdicating responsibilities toward the world's hungry, to the issue of what short-and long-term policies and practices need to be adopted to deal effectively with reducing pollution and hazardous waste while working toward a recycling, sustainable global society. *Madhok.*

## PHIL 304: Ethics and Public Policy

(1 Unit)
Emphasizes the ethical foundations of public policy. Rights, obligations, justice, autonomy, the nature of the good life: should these play a role in determining public policy, and if so, how? Focuses on the interaction between ethical values and public policy in areas such as health care, law, government, foreign policy, citizenship, education and media. *Madhok.*

## PLSC 302: Public Policy, Interest Groups, and the American Welfare State

(1 Unit)
Prerequisites: Sophomore standing, PLSC 100 and PLSC 101.
This seminar analyzes the United States and the development of a robust middle-class welfare state: i.e., the "hidden"

welfare state. While US centric, the seminar does not ignore a comparative analysis of other types of welfare states. The seminar analyzes key scholarship on contemporary state theory and American political development (APD) and engages broad questions about public policy, state formation, bureaucratic development, and the rise and fall of the New Deal/Administrative State (1932-1980). Emphasis will be on the fundamental role that interest group liberalism (IGL) has on the public policy arenas of: race relations, civil rights & civil liberties, healthcare, education, urban affairs, rural politics, and the way that IGL has configured law, legislation, and liberal democratic structures in the USA are the primary areas for analysis. The seminar will provide an opportunity for students that wish to in a purposely cross-disciplinary approach: an approach that draws heavily on scholarship in politics, history, and political sociology. *Staff*

### PLSC 256: Human Rights

(1 Unit)
Introduces the key concepts and theoretical tools for understanding human rights and human rights policy in the context of the modern world. Examines human rights in a global comparative context with emphases on all the major world regions. Draws on the central theories and concepts of comparative politics and international relations to explain how and why governments protect (or fail to) human rights and to examine the intersection among citizens, governments, and non-governmental organizations that work to investigate and protect against human rights abuses. *Walling.*

### RS 242: Christian Ethics

(1 Unit)
An introduction to the foundations and applications of Christian theological ethics. Investigates Christian perspectives on moral issues such as sex and marriage, medical ethics and social justice. *Mourad.*

## Experiential Requirements:

Attendance at a series of seminars each semester. In these, students who completed internships the previous semester will report on them, and other items of general interest, such as graduate schools and careers, will be discussed.

## Completion of One of the Following for up to One-half Unit:

An environmental research project, service project or internship. Students should have prior approval of the concentration director, and must make a presentation in the seminar and submit a paper summarizing the experience.

One-year of residence in Environmental House with

### ENVN 206: Sustainable Living Seminar

(1/2 Unit)
Residents of the College's E-house and other students explore, through practice, the relationship between their daily actions and the earth's ecosystems. Several models of sustainability are discussed, and students are asked to articulate the view they believe appropriate for their own lives. Students cooperatively develop a significant improvement in the house or its grounds and monitor the environmental footprint of their actions. Note that residence in the E-House is not available in 2015-16. *Staff.*

(Note that residence in the E-House is not available in 2015-16.)

### ENVN 201: Ecology and Environmental Field Trip

(1/2 Unit)
Prerequisites: Membership in the Center for Sustainability of the Environment and permission of the instructor. Demonstrates, in seminars and a one-two week field trip to a selected region of the United States, how ecosystems have been shaped by the interplay of biological, geological and human history and are thus both adapted to, and susceptible to changes in, modern landscape, climate and human practices. Examines environmental issues of both local and national significance related to these ecosystems. *Staff.*

# Geographic Information Systems (GIS) Minor

## Requirements for Minor in Geographic Information Systems (GIS)

## Three Units in GIS and Remote Sensing:

### GEOL 111: Geography and Geographic Information Systems

(1 Unit)
An introduction to the elementary principles, techniques and utility of geographic information systems (GIS) toward the study of world geography, as well as related concepts and techniques involved in creating and using digital maps. Shows how maps (particularly computer-generated maps) can help in displaying and analyzing geographic and other spatial data, and the use of these analyses in modeling cultural and natural systems. Some prior computer experience is helpful, but is not required. Lecture and laboratory. *McRivette.*

### GEOL 211: Remote Sensing and Geographic Information Systems

(1 Unit)
Prerequisite: GEOL 111 recommended.
An introduction to the elementary principles, techniques and utility of remotely sensed imagery and image interpretation, especially when used in conjunction with Geographic Information Systems (GIS). Shows how digital maps created from, or utilizing, digital imagery from airplanes, space shuttles and satellites can help in displaying and analyzing spatial data, modeling processes and making decisions. Laboratory emphasizes the use of remote sensing and GIS in a variety of environmental applications. Lecture and laboratory. Offered in alternate years. *McRivette.*

### GEOL 311: Advanced Geographic Information Systems

(1 Unit)
Prerequisite: GEOL 111 or permission of instructor.
The study of the more advanced capabilities of Geographic Information Systems (GIS). Emphasizes spatial modeling and analysis using GIS software such as ArcView GIS. Topics include map algebra, point pattern analysis, network analysis, grid analysis and 3-D surface analysis. Students learn how to use these and other GIS tools for decision-making, model building and the effective use of maps. Lecture and laboratory. Offered in alternate years. *McRivette.*

## Two Units Selected From:

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence

interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

### E&M 200: Economic Statistics

(1 Unit)
Prerequisite: Math 120 or demonstrated proficiency, MATH 125, or MATH 141.
A first course in statistics with emphasis on regression analysis and its applications in economics and management. Not open to students who have taken MATH 209 or MATH 309. *Jaqua.*

### MATH 120: College Algebra

(1 Unit)
Prerequisites: 2.0 or higher in MATH 100 or equivalent, or appropriate score on the mathematics placement assessment.
A modern, unified approach to algebra and analytical geometry based on the concept of a function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Together with MATH 127 , serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of algebra, trigonometry and logarithms should elect MATH 141 in place of MATH 120. A graphing calculator is required. Not open to students who have completed MATH 125 . A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff*

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

(or a higher level mathematics course)

### CS 171: Introduction to Computer Science I

(1 Unit)
Prerequisite: MATH 125 (or equivalent) or permission of instructor.
Designed to be the first computer science course taken by students in mathematics and computer science. Topics include fundamentals of computation and algorithmic problem-solving, data types, control structures, the object-oriented programming paradigm and applications. Introduces a high-level programming language such as Java or Python. *Reimann.*

- A pre-approved course with a significant GIS and/or remote sensing component.

## Additional Requirements

- A pre-approved experience focusing on the application of GIS or remote sensing in the student's field of study. This could be satisfied by a directed study, a summer research experience, or an internship/work experience.
- Departmental Colloquia: All GIS minors are required to attend departmental colloquia regularly and to present once each semester for two semesters.
- All courses for the minor must be taken for a numerical grade, except those offered only on a credit/no credit basis.

# Geology Minor

## Requirements for Minor in Geology

## Five Units in Geology, Including:

### GEOL 101: Introductory Geology

(1 Unit)
A survey course designed for liberal arts students covering many aspects of physical geology, the study of active earth processes. Labs illustrate lecture materials and the techniques used by geologists. One field trip. Complements the material covered in GEOL 103; either course can serve as an introductory course in geology. *Staff.*

**OR**

### GEOL 103: Introduction to Earth History

(1 Unit)
A survey course designed for liberal arts students and covering many aspects of historical geology, the study of evolving environments and life forms on earth. Labs utilize fossils, rock samples, maps and field trips to illustrate techniques used by historical geologists. Complements the material covered in GEOL 101; either course can serve as an introductory course in geology. *Staff.*

- Plus four other geology courses, three of which are courses at the 200- or 300-level selected in consultation with and approved by the department chair.

## Additional Requirements

Completion of an approved field experience (e.g. research experience or internship with a significant field component or GEOL 210 or GEOL 314).

Departmental Colloquia: All geology minors are required to attend departmental colloquia regularly and to present once each semester for two semesters.

All courses for the minor must be taken for a numerical grade.

Note: This minor may not be elected by geology majors.

# Geology, B.A.

## Requirements for Major in Geology

The geology major is designed both for the student who plans to pursue graduate studies in some aspect of geology or become a professional geologist, and for the student who has professional aspirations outside of geology.

Nine units in geology, including; a field work experience; participation in all departmental colloquia during the junior and senior years; two cognate courses.

## Introductory Geology Courses

Two courses from the following list, at least one of which must be GEOL 101 or 103.

### GEOL 101: Introductory Geology

(1 Unit)
A survey course designed for liberal arts students covering many aspects of physical geology, the study of active earth processes. Labs illustrate lecture materials and the techniques used by geologists. One field trip. Complements the material covered in GEOL 103; either course can serve as an introductory course in geology. *Staff.*

### GEOL 103: Introduction to Earth History

(1 Unit)
A survey course designed for liberal arts students and covering many aspects of historical geology, the study of evolving environments and life forms on earth. Labs utilize fossils, rock samples, maps and field trips to illustrate techniques used by historical geologists. Complements the material covered in GEOL 101; either course can serve as an introductory course in geology. *Staff.*

### GEOL 104: Earth Resources and the Environment

(1 Unit)
Without earth resources, civilization would not exist. Gold, diamonds, water, oil, building materials—all of our material resources ultimately are derived from the earth. This course examines the origin and geologic occurrence of these materials and the environmental implications of their utilization. No laboratory. *Staff.*

### GEOL 106: Natural Disasters

(1 Unit)
A review of the natural disasters that affect humans and the environment. Emphasizes the causes and prediction of natural hazards, assessment of hazard vulnerability, and disaster mitigation and recovery through case studies of historical and recent natural disasters. Topics include earthquakes, volcanoes, landslides, extreme weather, climate change and floods. No laboratory. *Staff.*

### GEOL 115: Oceans, Atmosphere and Climate

(1 Unit)
Describes the world's oceans and atmosphere and considers how they interact with one another, and with humans. Topics include the geological evolution of the ocean basins, ocean-atmosphere circulation patterns, ocean currents, climate and weather patterns, storms and weather fronts, paleo-oceanography and the history of climate, and the chemical composition of the oceans. Emphasizes the role of the oceans in mediating global climate, global change, global dispersal of pollution and other environmental concerns. No laboratory. Offered in alternate years. *T. Lincoln, Wilch.*

## Required Avanced Geology Courses:

### GEOL 201: Structural Geology

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
Study of stress-strain relationships and behavior of materials, with particular reference to recognition and interpretation of rock structures. Laboratory work includes methods of solving structural problems and the use of geologic maps and cross-sections to interpret sequences of events in complex structural regions. Offered in alternate years. *B. Lincoln.*

### GEOL 203: Mineralogy

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
Crystallography, crystal chemistry, optical and physical properties, and the occurrence of rock-forming minerals, with particular emphasis on the silicate minerals. Laboratory emphasizes hand-specimen and optical identification of minerals using petrologic microscopes. Offered in alternate years. *Menold.*

### GEOL 205: Sedimentation and Stratigraphy

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
An examination of the processes and principles that control the accumulation and lithification of sediments, based on examples of recent environments and ancient rock sections in many parts of the world. Laboratory emphasizes map-reading skills and methods for studying recent and ancient sediments and rocks. Offered in alternate years. *Bartels.*

### GEOL 208: Geomorphology

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
Geologic processes operating at the earth's surface and the landforms they produce. Includes the study of soil formation, river processes, glaciers, wave action, wind, groundwater and their related landforms. Field trips. Laboratory includes analysis of aerial photographs, topographic maps and experiments with flume and wave tank. Offered in alternate years. *Wilch.*

## Two Cognate Courses Including:

### CHEM 152: Principles of Chemistry

(1 Unit)
Basic principles of stoichiometry, atomic and molecular structure, equilibrium, thermodynamics and kinetics. Thematic content will be used to explain how the foundational principles of chemistry can be used to explain the world around us. Topical applications and issues will vary with instructor. *Bieler, Harris, Lewis, McCaffrey, Metz, Rohlman, Streu.*

## And Another Chosen From:

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

## PHYS 115: General Physics

(1 Unit)
Prerequisite: High school algebra. First-year students need permission of instructor.
First semester of an algebra-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Includes analytical, historical and philosophical aspects. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

## PHYS 116: General Physics

(1 Unit)
Prerequisite: PHYS 115.
Second semester of an algebra-based survey of general physics. Topics include electricity and magnetism, light and optics, and atomic and nuclear physics. Includes analytical, historical and philosophical aspects. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff*

## PHYS 167: Analytical Physics I

(1 Unit)
Corequisite: MATH 141, or permission of instructor.
First semester of a calculus-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

### PHYS 168: Analytical Physics II

(1 Unit)
Prerequisite: PHYS 167. Corequisite: MATH 143 or permission of instructor.
Second semester of a calculus-based survey of general physics. Topics include electricity and magnetism, light and optics, and select topics in modern physics. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

### BIOL 195: Ecology, Evolution and Biodiversity

(1 Unit)
Focuses on whole organisms and their evolutionary and ecological relationships. Evolutionary processes, biological diversity, conservation biology and human impacts on ecology and biodiversity are major themes. Skills introduced are hypothesis testing, experimental design, use of primary literature in writing assignments and basic statistics. Lecture and laboratory. *Staff.*

### CHEM 214: Inorganic Chemistry

(1 Unit)
Prerequisite: CHEM 154
A systematic introduction to the study of the synthesis, reactions, structures and properties of compounds of the elements. Topics include bonding theories, acid-base chemistry, oxidation and reduction chemistry, coordination chemistry and the applications and reactions of these complexes, and solid state chemistry. Lecture and laboratory
*Bieler, Lewis, McCaffrey, Metz*

## Requirements for All Students Majoring in Geology or Earth Science

- All students completing a major in geology or earth science must satisfy a field work requirement equivalent to one unit of study. This requirement may be fulfilled by summer research, internship or work experiences, academic year directed studies, completion of GEOL 210 or GEOL 314, other suitable field experiences approved by the faculty (such as field trips sponsored by GSA), or some combination of the above.
    - After completing three or four geology courses or at the end of their junior year, geology majors planning graduate study and/or a professional geology career are urged to attend either the Albion summer field camp in the Rocky Mountains or a similar summer geology field course offered by another college or university. This experience is required by most graduate schools before entering a graduate program and is required by many industries and institutions employing geologists.
- A maximum of one geographic information systems course (GEOL 111, GEOL 211 or GEOL 311) may be counted toward the major.
- Departmental Colloquia: All geology and earth science majors are required to attend departmental colloquia regularly and to participate once each semester for four semesters.
- The geology units and the required cognate courses must be taken for a numerical grade. Students considering a geology major are urged to complete the cognate units as early as possible in their Albion career.

# Geology, with Education Concentration, B.A.

## Requirements for Major in Geology with Education Concentration

- Nine units in geology and the completion of all other requirements as listed under the geology major requirements above.
- Demonstrated mathematics proficiency at the MATH 125 level.
- Completion of Education Concentration.

### PHYS 105: Introductory Astronomy

(1 Unit)
Prerequisite: High school algebra.
A study of the night sky, planets, stars, galaxies, cosmology, and our place in the universe, along with discussion of observational techniques and space missions. Not intended for science and mathematics majors or minors or students who have taken physics or calculus in high school. Lecture and laboratory, with additional multiple observing sessions required. *Zellner.*

### GEOL 104: Earth Resources and the Environment

(1 Unit)
Without earth resources, civilization would not exist. Gold, diamonds, water, oil, building materials—all of our material resources ultimately are derived from the earth. This course examines the origin and geologic occurrence of these materials and the environmental implications of their utilization. No laboratory. *Staff.*

### GEOL 115: Oceans, Atmosphere and Climate

(1 Unit)
Describes the world's oceans and atmosphere and considers how they interact with one another, and with humans. Topics include the geological evolution of the ocean basins, ocean-atmosphere circulation patterns, ocean currents, climate and weather patterns, storms and weather fronts, paleo-oceanography and the history of climate, and the chemical composition of the oceans. Emphasizes the role of the oceans in mediating global climate, global change, global dispersal of pollution and other environmental concerns. No laboratory. Offered in alternate years. *T. Lincoln, Wilch.*

(taken as electives outside the major)

## Requirements for All Students Majoring in Geology or Earth Science

- All students completing a major in geology or earth science must satisfy a field work requirement equivalent to one unit of study. This requirement may be fulfilled by summer research, internship or work experiences, academic year directed studies, completion of GEOL 210 or GEOL 314, other suitable field experiences approved by the faculty (such as field trips sponsored by GSA), or some combination of the above.
    - After completing three or four geology courses or at the end of their junior year, geology majors planning graduate study and/or a professional geology career are urged to attend either the Albion summer field camp in the Rocky Mountains or a similar summer geology field course offered by another college or university. This experience is required by most graduate schools before entering a graduate program and is required by many industries and institutions employing geologists.
- A maximum of one geographic information systems course (GEOL 111, GEOL 211 or GEOL 311) may be counted toward the major.

- Departmental Colloquia: All geology and earth science majors are required to attend departmental colloquia regularly and to participate once each semester for four semesters.
- The geology units and the required cognate courses must be taken for a numerical grade. Students considering a geology major are urged to complete the cognate units as early as possible in their Albion career.

# Paleontology (for Geology Majors) Minor

## Requirements for Minor in Paleontology (for Geology Majors)

## Five Units, Including:

- An approved independent research experience selected in consultation with and approved by the department, which may be the same as the project carried out for the geology major.

### BIOL 195: Ecology, Evolution and Biodiversity

(1 Unit)
Focuses on whole organisms and their evolutionary and ecological relationships. Evolutionary processes, biological diversity, conservation biology and human impacts on ecology and biodiversity are major themes. Skills introduced are hypothesis testing, experimental design, use of primary literature in writing assignments and basic statistics. Lecture and laboratory. *Staff.*

### GEOL 209: Chronostratigraphy and Invertebrate Paleontology

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103, or BIOL 195.
This course surveys the long history of life, as recorded by the fossil record. A comprehensive examination of invertebrate fossils throughout geologic time emphasizes study of fossils and their identification, biology, evolutionary history, and use in geology. One field trip. Laboratory emphasizes invertebrate fossil identification, functional morphology, preservation, and geochronologic utility. Offered in alternate years. Laboratory emphasizes fossil identification, morphology, and functional morphology, and geochronologic exercises using fossils and other geologic data. Offered in alternate years. *Marshall.*

### GEOL 309: Vertebrate Paleontology

(1 Unit)
Prerequisite: GEOL 103 or BIOL 195.
The fossil record, evolution, morphology, adaptation and paleobiogeography of fish, amphibians, reptiles, birds and mammals. The interactions of vertebrates with ancient floras, climates and plate configurations will be emphasized. Lecture and laboratory. Offered in alternate years. Same as BIOL 309. *Bartels.*

**OR**

### BIOL 309: Vertebrate Paleontology

(1 Unit)
Prerequisite: GEOL 103 or BIOL 195.
Must be taken as Biology 309 for credit toward the major. Lecture and laboratory. Same as GEOL 309. *Staff.*

Two Units From:

### BIOL 216: Vascular Plants

(1 Unit)
Prerequisite: BIOL 195.
Morphology, taxonomy and distribution of vascular plants. Representatives of local flora receive special attention in laboratory and field studies. Lecture and laboratory. *Staff*

### BIOL 225: Invertebrate Zoology

(1 Unit)
Prerequisite: BIOL 195.
Field-oriented course emphasizing evolution, classification, ecology, behavior and natural history of invertebrate animals. Class involves field trips and use of the Whitehouse Nature Center. Lecture and laboratory. *Cahill.*

### BIOL 227: Vertebrate Zoology

(1 Unit)
Prerequisite: BIOL 195.
Classification, behavior, ecology and evolution of the vertebrates. Mammals and birds are emphasized more than other groups. Lecture and laboratory. *Hallinger*.

### BIOL 237: Ecology

(1 Unit)
Prerequisite: BIOL 195.
A study of interactions between organisms and their environment including adaptation, competition, parasitism, population and community dynamics and the ecosystem concept. Class involves field trips and use of the Whitehouse Nature Center. Lecture and laboratory. *Lyons-Sobaski.*

### BIOL 248: Ornithology

(1 Unit)
Prerequisite: BIOL 195.
The biology of birds with emphasis on evolution, behavior, ecology and conservation. Field experience in identification, population studies, bird banding, song recording and analysis, and carrying out a research project. Students will learn to critically evaluate the ornithological literature. Lecture and laboratory. *Hallinger.*

### BIOL 295: Evolution

(1 Unit)
Prerequisite: BIOL 195 or permission of instructor.
A study of the course and processes of organic evolution. Topics include the history of ideas of evolution, population genetics, population ecology, speciation, adaptation, coevolution, evolutionary rates, evolutionary convergences, mass extinctions and biogeography. Lecture and laboratory. Offered in alternate years. *Lyons-Sobaski.*

### BIOL 314: Comparative Anatomy

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
Comparative anatomical study of vertebrate organ systems, their development and evolution. Lecture and laboratory. *Hallinger*.

## Additional Requirements

- All courses for the minor must be taken for a numerical grade.

# Paleontology (for Non-Geology Majors) Minor

## Requirements for Minor in Paleontology (for Non-Geology Majors)

## Five Units, Including:

### GEOL 103: Introduction to Earth History

(1 Unit)
A survey course designed for liberal arts students and covering many aspects of historical geology, the study of evolving environments and life forms on earth. Labs utilize fossils, rock samples, maps and field trips to illustrate techniques used by historical geologists. Complements the material covered in GEOL 101; either course can serve as an introductory course in geology. *Staff.*

### GEOL 209: Chronostratigraphy and Invertebrate Paleontology

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103, or BIOL 195.
This course surveys the long history of life, as recorded by the fossil record. A comprehensive examination of invertebrate fossils throughout geologic time emphasizes study of fossils and their identification, biology, evolutionary history, and use in geology. One field trip. Laboratory emphasizes invertebrate fossil identification, functional morphology, preservation, and geochronologic utility. Offered in alternate years. Laboratory emphasizes fossil identification, morphology, and functional morphology, and geochronologic exercises using fossils and other geologic data. Offered in alternate years. *Marshall.*

### GEOL 309: Vertebrate Paleontology

(1 Unit)
Prerequisite: GEOL 103 or BIOL 195.
The fossil record, evolution, morphology, adaptation and paleobiogeography of fish, amphibians, reptiles, birds and mammals. The interactions of vertebrates with ancient floras, climates and plate configurations will be emphasized. Lecture and laboratory. Offered in alternate years. Same as BIOL 309. *Bartels.*

**OR**

### BIOL 309: Vertebrate Paleontology

(1 Unit)
Prerequisite: GEOL 103 or BIOL 195.
Must be taken as Biology 309 for credit toward the major. Lecture and laboratory. Same as GEOL 309. *Staff.*

### BIOL 195: Ecology, Evolution and Biodiversity

(1 Unit)
Focuses on whole organisms and their evolutionary and ecological relationships. Evolutionary processes, biological diversity, conservation biology and human impacts on ecology and biodiversity are major themes. Skills introduced are hypothesis testing, experimental design, use of primary literature in writing assignments and basic statistics. Lecture and laboratory. *Staff.*

## And One Unit From:

### GEOL 205: Sedimentation and Stratigraphy

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
An examination of the processes and principles that control the accumulation and lithification of sediments, based on examples of recent environments and ancient rock sections in many parts of the world. Laboratory emphasizes map-reading skills and methods for studying recent and ancient sediments and rocks. Offered in alternate years. *Bartels.*

### GEOL 208: Geomorphology

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
Geologic processes operating at the earth's surface and the landforms they produce. Includes the study of soil formation, river processes, glaciers, wave action, wind, groundwater and their related landforms. Field trips. Laboratory includes analysis of aerial photographs, topographic maps and experiments with flume and wave tank. Offered in alternate years. *Wilch.*

### GEOL 412: Directed Study

(1 Unit)
*Staff.*

**OR**

### GEOL 411: Directed Study

(1/2 Unit)
*Staff.*

## Additional Requirements

- Completion of an approved field experience (e.g., a research experience or internship with a significant field component or from the following)
- Departmental Colloquia: All paleontology minors are required to attend departmental colloquia regularly and to present once each semester for two semesters.
- All courses for the minor must be taken for a numerical grade.

# Economics and Management

# Faculty

**John B. Bedient**, Chair and associate professor.
B.A., Alma College; M.B.A., Indiana University; C.P.A.. Appointed 1985.

**Vicki L. Baker,** professor.
B.A., Indiana University of Pennsylvania; M.B.A., Clarion University; M.S., Ph.D., Pennsylvania State University. Appointed 2007.

**John M. Carlson**, associate professor.
B.S., Ball State University; C.P.A., C.M.A.; M.B.A.; Ph.D., University of Cincinnati. Appointed 2012.

**Jon A. Hooks**, professor.
B.S., Cameron University; M.A., University of Texas, Dallas; M.A., Ph.D., Michigan State University; C.F.A. Appointed 1989.

**Daniel H. Jaqua**, assistant professor.
B.S., B.A., Rice University; Ph.D., University of Michigan. Appointed 2015.

**Zhen Li**, professor, holder of E. Maynard Aris endowed chair.
B.A., Peking University; M.A.; Ph.D., Princeton University. Appointed 2004.

**Gregory M. Saltzman**, professor.
S.B., S.M., Massachusetts Institute of Technology; M.A., Ph.D., University of Wisconsin. Appointed 1986.

# Introduction

The Economics and Management Department provides students with an understanding of economic and management principles that will be useful throughout their careers. We address both the immediate application of problem-solving techniques and the conceptual basis for those techniques. The department offers an 8-unit major in economics and management, a 9.5-10 unit major in accounting (corporate track or C.P.A. track), a 10-unit major in business, a 10-unit major in economics and management with emphasis (emphases in economics, general business, human resources, or international business and international economics), a 10-unit major in finance and an 8-unit major in marketing management. We offer five minors: accounting, economics. finance, and management and marketing management. The department also supports the interdepartmental majors in mathematics/economics, public policy, and social studies.

Economics and Management Department Website

# Career Opportunities

Graduates in economics and management have professional opportunities in many aspects of business, including accounting, banking, finance, human resources, international business, marketing and sales, and retailing. The program also provides a strong background for graduate study in law, business, economics, public policy studies and related areas. Albion offers all the courses needed to meet the 150-hour requirement for becoming a certified public accountant.

# Special Features

The department spans the worlds of theory and practice. We teach students how to analyze problems faced by businesses, government, or nonprofit organizations; make decisions; and lead. The department maintains a close relationship with the business world, which aids in the placement of graduates.

# Departmental Policy on Advanced Placement Credit

Students who earn a 5 on the Advanced Placement (AP) exam in microeconomics will receive one unit of credit for E&M 101. Students who earn a 4 will receive one unit of credit for E&M 191. E&M 191 will not meet the E&M 101 requirement for the E&M major but will count toward the 32 units for graduation.

Students who earn a 5 on the Advanced Placement (AP) exam in macroeconomics will receive one unit of credit for E&M 102. Students who earn a 4 will receive one unit of credit for E&M 192. E&M 192 will not meet the E&M 102 requirement for the E&M major but will count toward the 32 units for graduation.

# Student Learning Outcomes

*Accounting Major CPA Emphasis*

**After completing the Accounting major CPA Emphasis graduates should be able to:**

1. Demonstrate knowledge of preparation of Financial Statements in accordance with Generally Accepted Accounting Principles (GAAP)
2. Apply quantitative skills to analyze financial and/or contextual information in order to make decisions
3. Communicate clearly and effectively orally or in writing
4. Interpret & apply the professional & ethical responsibilities of accountants to ethical dilemmas
5. Demonstrate an understanding of internal control concepts

*Accounting Major Corporate Emphasis*

**After completing the Accounting Major Corporate Emphasis, graduates should be able to**:

1. Demonstrate knowledge of preparation of Financial Statements in accordance with Generally Accepted Accounting Principles (GAAP)
2. Apply quantitative skills to analyze financial and/or contextual information in order to make decisions
3. Communicate clearly and effectively orally or in writing
4. Interpret & apply the professional & ethical responsibilities of accountants to ethical dilemmas
5. Effectively use knowledge of managerial accounting concepts

*Accounting Minor Corporate Emphasis*

**After completing the Accounting Minor Corporate Emphasis, graduates should be able to**:

1. Demonstrate knowledge of preparation of Financial Statements in accordance with Generally Accepted Accounting Principles (GAAP)

2 Apply quantitative skills to analyze financial and/or contextual information in order to make decisions

3. Communicate clearly and effectively orally or in writing

*Business Major*

**After completing the Business major, graduates should be able to:**

1. Apply theory (e.g., accounting, economic, management, leadership) to analyze real-world situations and various policy implications
2. Students will be able to communicate effectively orally and/or in writing
3. Use information to support finances, processes and practices, such as problem analysis and decision making
4. Appraise how management concepts inform and/or contribute to a greater understanding of work practices
5. Investigate tools from various fields of marketing and/or communications to describe a profitable business and marketing strategy

*Economics Major*

**After completing the Economics Major graduates should be able to:**

1. Define and calculate economic statistics such as price elasticity, economic profit, GDP, unemployement rate
2. Graphically illustrate various economic models and interpret the results
3. Apply economic theory to real-world situations with policy implications
4. Implement quantitative methods to examine economic problems
5. Demonstrate effectively orally and/or in writing on a course project

*Economics Minor*

**After completing the Economics Minor graduates should be able to:**

1. Define and calculate economic statistics such as price elasticity, economic profit, GDP, unemployement rate
2. Graphically illustrate various economic models and interpret the results
3. Apply economic theory and/or quantitative analysis to real-world situations with policy implications

*Economics & Management Major*

**After completing the Economics & Management Major graduates should be able to:**

1. Define and calculate economic statistics such as price elasticity, economic profit, GDP, unemployment rate

2. Graphically illustrate vairous economic models and interpret the results

3. Apply economic theory and/or quantitative analysis to real-world situations with policy implications

4. Understand basic concepts and principles in the areas of accounting, marketing, business, finance, and/or management

5. Demonstrate effectively orally and/or in writing on a course project

*Economics & Management Major, Human Resources Emphasis*

**After completing the Economics & Management Major, Human Resources Emphasis graduates should be able to:**

1. Apply theory (e.g., accounting, economics, management, leadership) to analyze real-world situations and various policy implications

2. Appraise how management concepts inform and/or contribute to a greater understanding of work practices

3. Students will be able to communicate effectively orally and/or in writing

4. Investigate how human resource practices effect the human capital and the organization

5. Evaluate through an HR-related lens (e.g., historical, gender, ethnicity) personnel issues that contribute to the overall success of the organizati

*Economics & Management Major, International Business and International Economics Emphasis*

**After completing the Economics & Management Major, International Business and International Economics Emphasis graduates should**

1. Define and calculate economics statistics such as price elasticity, economic profit, GDP, unemployment rate

2. Graphically illustrate various economic models and interpret the results

3. Appraise how accounting, finance, marketing, and/or management concepts inform and/or contribute to business decision-making

4. Examine business operations in a global setting and/or the relationships between international business and the political, economic, and social

5. Demonstrate effectively orally and/or in writing on a course project

*Finance Major*

**After completing the Finance Major graduates should be able to:**

1. Use information to support finances processes and practices, such as problem analysis and decision making

2. Apply quantitative skills to help analyze and solve finance problems

3. Understand how economic variables impact financial decision making

4. Understand the functioning of stock and bond markets, and derivative markets

5. Apply oral and written communication skills in a financial setting

*Finance Minor*

**After completing the Finance Minor graduates should be able to:**

1. Use information to support finances processes and practices, such as problem analysis and decision making

2. Apply quantitative skills to help analyze and solve finance problems

3. Apply oral and written communication skills ina financial setting

*Management Minor*

**After completing the Finance Minor graduates should be able to:**

1. Apply theory (e.g., accounting, economic, management, leadership) to analyze real-world situations and various policy implications

2. Appraise how management concepts inform and/or contribute to a greater understanding of work practices

3. Students will be able to communicate effectively orally and/or in writing

*Marketing Management Major*

**After completing the Marketing Management Major graduates should be able to:**

1. Define and calculate economic statistics such as price elasticity, economic profit, GDP, unemployement rate

2. Define and apply knowledge of the key marketing concepts such as segmentation, targeting, positioning, and 4 P's: (pricing, product, place (dis marketing communication)

3. Understand how marketers can design and adapt their campaigns and strategies based on the psychology of their buyers and the processes thes select, use, and dispose of products

4. Understand and implement the process of collecting, and/or analyzing consumer and/or market data to make informed decisions

5. Understand and/or analyze the tools and techniques available in traditional and/or digital marketing and communications strategies

6. Communicate effectively in written, spoken, and graphical form about specific marketing issues

*Marketing Management Minor*

**After completing the Marketing Management Minor graduates should be able to:**

1. Define and calculate economic statistics such as price elasticity, economic profit

2. Understand and apply knowledge of the key marketing concepts such as segmentation, targeting, positioning, and 4P's: (pricing, product, place marketing communication)

3. Communicate effectively in written, spoken and/or graphical form about specific marketing issues

# Accounting, C.P.A. Emphasis, B.A.

## Requirements for Accounting Major (9.5-10 units)

- All courses for the major must be taken for a numerical grade.

## A Minimum of 9.5 or 10 Units in Accounting, Economics, and Management, Including:

### E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

### E&M 102: The Economy and Financial Markets

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the macroeconomy and macroeconomic models with special emphasis on the role of financial markets, interest rates, the Federal Reserve, monetary and fiscal policy, and money and capital markets. *Hooks, Li.*

### E&M 211: Financial Accounting

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the world of business and accounting. Emphasis on understanding the concepts of net income, cash flow and financial condition. Communication of economic results through financial statements and reports. Development of analytical skills used in evaluating business success. Not open to first-year students. *Bedient, Carlson.*

### E&M 212: Managerial and Cost Accounting

(1 Unit)
Prerequisite: E&M 211 or permission of instructor.
Development and use of accounting information for effective managerial control and decision-making within a complex organization. Topics include cost behavior, profit planning, cost accounting (including job order, process and activity-based), just-in-time inventory control, standard costs and budgetary control. *Bedient, Carlson.*

### E&M 311: Intermediate Accounting I

(1 Unit)
Prerequisite: E&M 211.
Theory and practice underlying financial accounting measurement and reporting. Provides a detailed exploration of assets and their relationship to income determination. Includes coverage of generally accepted United States accounting principles (GAAP) and international financial reporting standards (IFRS). *Bedient, Carlson.*

### E&M 312: Intermediate Accounting II

(1 Unit)
Prerequisite: E&M 211.
Theory and practice underlying financial accounting measurement and reporting. Provides a detailed exploration of

liabilities and stockholders' equity, and other selected topics including pensions, leases and the statement of cash flows. Includes coverage of generally accepted United States accounting principles (GAAP) and international financial reporting standards (IFRS). Usually taken after E&M 311. *Bedient, Carlson.*

## E&M 313: Federal Income Taxation

(1 Unit)
Prerequisite: E&M 311.
Comprehensive introduction to federal income taxation, particularly as it relates to individuals and businesses. Emphasis on the recognition of opportunities for effective tax planning and management. *Carlson.*

## E&M 316: Auditing

(1 Unit)
Prerequisites: E&M 311 or E&M 312.
Introduction to auditing concepts, objectives and standards; topics include professional ethics, types of audits (their purpose, scope, and methodology). EDP auditing, and statistical sampling. Reference will be made to authoritative auditing standards and pronouncements. *Bedient, Carlson.*

## E&M 317: Accounting Information Systems

(1/2 Unit)
Prerequisite: E&M 311.
Provides a basic knowledge of the components of an accounting information system and the controls required to operate it efficiently. Students receive hands-on experience with a computerized accounting system. *Bedient.*

## E&M 310: Governmental and Not-for-Profit Accounting

(1/2 Unit)
Prerequisite: E&M 211.
E&M 311 recommended. An introduction to accounting and financial reporting for governmental entities and non-profit organizations. Covers state and local governments, colleges and 165 universities, health care entities, museums, libraries and performing arts organizations. *Bedient.*

## E&M 314: Advanced Taxation and Corporate Transactions

(1 Unit)
Prerequisite: E&M 313.
A continuation of E&M 313. Taxation of corporations, partnerships, estates and trusts. Tax planning and management strategy aspects of corporate formation and reorganization. Students prepare and revise legal memoranda on tax issues. Students may not receive credit for both E&M 314 and E&M 315. *Carlson.*

**OR**

## E&M 315: Advanced Taxation

(1/2 Unit)
Prerequisite: E&M 313.
A continuation of E&M 313. Introduction to the taxation of corporations, partnerships, estates, and trusts. Students may not receive credit for both E&M 314 and E&M 315. *Carlson.*

## Two Units of Cognates, Including:

### MATH 120: College Algebra

(1 Unit)
Prerequisites: 2.0 or higher in MATH 100 or equivalent, or appropriate score on the mathematics placement assessment.
A modern, unified approach to algebra and analytical geometry based on the concept of a function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Together with MATH 127 , serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of algebra, trigonometry and logarithms should elect MATH 141 in place of MATH 120. A graphing calculator is required. Not open to students who have completed MATH 125 . A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff*

**OR**

### MATH 125: Precalculus

(1 Unit)
Prerequisite: 2.0 or higher in Math 100 or appropriate score on teh mathematics placement assessment.
A modern, unified approach to algebra, trigonometry, logarithms and analytical geometry based on the concept of a function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions, trigonometric and inverse trigonometric functions, and analytic geometry (the circle, the parabola, the ellipse and the hyperbola) are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of algebra, trigonometry and logarithms should elect MATH 141 in place of Mathematics 125. A graphing calculator is required. Not open to students who have completed Math 120. *Staff.*

**OR**

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

(or higher or demonstrated proficiency)

**AND**

### E&M 200: Economic Statistics

(1 Unit)
Prerequisite: Math 120 or demonstrated proficiency, MATH 125, or MATH 141.
A first course in statistics with emphasis on regression analysis and its applications in economics and management. Not open to students who have taken MATH 209 or MATH 309. *Jaqua.*

**OR**

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

**OR**

### MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

# Accounting, Corporate Emphasis, B.A.

## Requirements for Accounting Major (9.5-10 units)

- All courses for the major must be taken for a numerical grade.

## A Minimum of 9.5 or 10 Units in Accounting, Economics, and Management, Including:

### E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

### E&M 102: The Economy and Financial Markets

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.

Introduction to the macroeconomy and macroeconomic models with special emphasis on the role of financial markets, interest rates, the Federal Reserve, monetary and fiscal policy, and money and capital markets. *Hooks, Li.*

## E&M 201: Intermediate Microeconomics

(1 Unit)
Prerequisites: E&M 101: and MATH 120 or demonstrated proficiency, MATH 125, or MATH 141.
Theoretical analysis of consumer choice theory and demand, production and cost, the firm and market organization, distribution and general equilibrium, game theory. *Jaqua.*

OR

## E&M 209: Intermediate Microeconomics with Calculus

(1 Unit)
Prerequisite: E&M 101 and MATH 141 or permission of instructor.
A more rigorous version of E&M 201 for students pursuing the mathematics/economics major and for others with the necessary math background by permission. Not offered every year. *Jaqua.*

## E&M 202: Intermediate Macroeconomics

(1 Unit)
Prerequisites: E&M 101; E&M 102; and MATH 120 ro demonstrated proficiency, MATH 125, or MATH 141.
The development of macroeconomic theory and its application to government policy toward unemployment, inflation and growth. *Hooks, Li.*

## E&M 211: Financial Accounting

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the world of business and accounting. Emphasis on understanding the concepts of net income, cash flow and financial condition. Communication of economic results through financial statements and reports. Development of analytical skills used in evaluating business success. Not open to first-year students. *Bedient, Carlson.*

## E&M 212: Managerial and Cost Accounting

(1 Unit)
Prerequisite: E&M 211 or permission of instructor.
Development and use of accounting information for effective managerial control and decision-making within a complex organization. Topics include cost behavior, profit planning, cost accounting (including job order, process and activity-based), just-in-time inventory control, standard costs and budgetary control. *Bedient, Carlson.*

## E&M 248: Financial Modeling with Excel

(1 Unit)
Introduction to Excel and the application of Excel to finance. Includes use of Excel to model various financial concepts and apply these concepts to real world situations. *Bedient, Hooks.*

## E&M 311: Intermediate Accounting I

(1 Unit)
Prerequisite: E&M 211.
Theory and practice underlying financial accounting measurement and reporting. Provides a detailed exploration of assets and their relationship to income determination. Includes coverage of generally accepted United States accounting principles (GAAP) and international financial reporting standards (IFRS). *Bedient, Carlson.*

### E&M 312: Intermediate Accounting II

(1 Unit)
Prerequisite: E&M 211.
Theory and practice underlying financial accounting measurement and reporting. Provides a detailed exploration of liabilities and stockholders' equity, and other selected topics including pensions, leases and the statement of cash flows. Includes coverage of generally accepted United States accounting principles (GAAP) and international financial reporting standards (IFRS). Usually taken after E&M 311. *Bedient, Carlson.*

### E&M 314: Advanced Taxation and Corporate Transactions

(1 Unit)
Prerequisite: E&M 313.
A continuation of E&M 313. Taxation of corporations, partnerships, estates and trusts. Tax planning and management strategy aspects of corporate formation and reorganization. Students prepare and revise legal memoranda on tax issues. Students may not receive credit for both E&M 314 and E&M 315. *Carlson.*

**OR**

### E&M 315: Advanced Taxation

(1/2 Unit)
Prerequisite: E&M 313.
A continuation of E&M 313. Introduction to the taxation of corporations, partnerships, estates, and trusts. Students may not receive credit for both E&M 314 and E&M 315. *Carlson.*

- Plus one unit of elective in the department at the 200-level or higher

## Two Units of Cognates, Including:

### MATH 120: College Algebra

(1 Unit)
Prerequisites: 2.0 or higher in MATH 100 or equivalent, or appropriate score on the mathematics placement assessment.
A modern, unified approach to algebra and analytical geometry based on the concept of a function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Together with MATH 127 , serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of algebra, trigonometry and logarithms should elect MATH 141 in place of MATH 120. A graphing calculator is required. Not open to students who have completed MATH 125 . A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff*

**OR**

### MATH 125: Precalculus

(1 Unit)
Prerequisite: 2.0 or higher in Math 100 or appropriate score on teh mathematics placement assessment.
A modern, unified approach to algebra, trigonometry, logarithms and analytical geometry based on the concept of a function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions, trigonometric and inverse trigonometric functions, and analytic geometry (the circle, the parabola, the ellipse and the hyperbola) are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of algebra, trigonometry and logarithms should elect MATH 141 in place of Mathematics 125. A graphing calculator is required. Not open to students who have completed Math 120. *Staff.*

**OR**

## MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

(or higher or demonstrated proficiency)

**AND**

## E&M 200: Economic Statistics

(1 Unit)
Prerequisite: Math 120 or demonstrated proficiency, MATH 125, or MATH 141.
A first course in statistics with emphasis on regression analysis and its applications in economics and management. Not open to students who have taken MATH 209 or MATH 309. *Jaqua.*

**OR**

## MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

**OR**

### MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

# Accounting-Corporate Track Minor

## Information on Minors

The minors in accounting, economics, finance, management, and marketing management are not open to students with a major in the Economics and Management Department.

Students may not choose more than one minor in the Economics and Management Department.

All courses for the minor must be taken for a numerical grade, except those offered only on a credit/no credit basis.

## Requirements for Minor in Accounting-Corporate Track

## Five Units in Economics and Management, Including:

### E&M 211: Financial Accounting

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the world of business and accounting. Emphasis on understanding the concepts of net income, cash flow and financial condition. Communication of economic results through financial statements and reports. Development of analytical skills used in evaluating business success. Not open to first-year students. *Bedient, Carlson.*

### E&M 212: Managerial and Cost Accounting

(1 Unit)
Prerequisite: E&M 211 or permission of instructor.
Development and use of accounting information for effective managerial control and decision-making within a complex organization. Topics include cost behavior, profit planning, cost accounting (including job order, process and activity-based), just-in-time inventory control, standard costs and budgetary control. *Bedient, Carlson.*

and either

### E&M 311: Intermediate Accounting I

(1 Unit)
Prerequisite: E&M 211.
Theory and practice underlying financial accounting measurement and reporting. Provides a detailed exploration of assets and their relationship to income determination. Includes coverage of generally accepted United States accounting principles (GAAP) and international financial reporting standards (IFRS). *Bedient, Carlson.*

**OR**

### E&M 312: Intermediate Accounting II

(1 Unit)
Prerequisite: E&M 211.
Theory and practice underlying financial accounting measurement and reporting. Provides a detailed exploration of liabilities and stockholders' equity, and other selected topics including pensions, leases and the statement of cash flows. Includes coverage of generally accepted United States accounting principles (GAAP) and international financial reporting standards (IFRS). Usually taken after E&M 311. *Bedient, Carlson.*

## Plus Two From:

### E&M 248: Financial Modeling with Excel

(1 Unit)
Introduction to Excel and the application of Excel to finance. Includes use of Excel to model various financial concepts and apply these concepts to real world situations. *Bedient, Hooks.*

### E&M 311: Intermediate Accounting I

(1 Unit)
Prerequisite: E&M 211.
Theory and practice underlying financial accounting measurement and reporting. Provides a detailed exploration of assets and their relationship to income determination. Includes coverage of generally accepted United States accounting principles (GAAP) and international financial reporting standards (IFRS). *Bedient, Carlson.*

**OR**

### E&M 312: Intermediate Accounting II

(1 Unit)
Prerequisite: E&M 211.
Theory and practice underlying financial accounting measurement and reporting. Provides a detailed exploration of liabilities and stockholders' equity, and other selected topics including pensions, leases and the statement of cash flows. Includes coverage of generally accepted United States accounting principles (GAAP) and international financial reporting standards (IFRS). Usually taken after E&M 311. *Bedient, Carlson.*

(if not taken above)

### E&M 313: Federal Income Taxation

(1 Unit)
Prerequisite: E&M 311.
Comprehensive introduction to federal income taxation, particularly as it relates to individuals and businesses. Emphasis on the recognition of opportunities for effective tax planning and management. *Carlson.*

### E&M 316: Auditing

(1 Unit)
Prerequisites: E&M 311 or E&M 312.
Introduction to auditing concepts, objectives and standards; topics include professional ethics, types of audits (their purpose, scope, and methodology). EDP auditing, and statistical sampling. Reference will be made to authoritative auditing standards and pronouncements. *Bedient, Carlson.*

### E&M 348: Financial Management

(1 Unit)
Prerequisite: E&M 101.
A survey course covering principles of corporate financial management. Topics include working capital management, agency theory, capital budgeting, capital structure, divided policy, financial analysis and selected topics. *Hooks.*

### E&M 310: Governmental and Not-for-Profit Accounting

(1/2 Unit)
Prerequisite: E&M 211.
E&M 311 recommended. An introduction to accounting and financial reporting for governmental entities and non-profit organizations. Covers state and local governments, colleges and 165 universities, health care entities, museums, libraries and performing arts organizations. *Bedient.*

and (with approval of the E&M department chair)

### E&M 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## Two Units of Cognates:

### MATH 120: College Algebra

(1 Unit)
Prerequisites: 2.0 or higher in MATH 100 or equivalent, or appropriate score on the mathematics placement assessment.
A modern, unified approach to algebra and analytical geometry based on the concept of a function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Together with MATH 127 , serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of algebra, trigonometry and logarithms should elect MATH 141 in place of MATH 120. A graphing calculator is required. Not open to students who have completed MATH 125 . A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff*

Or higher

Or proven proficiency

### E&M 200: Economic Statistics

(1 Unit)
Prerequisite: Math 120 or demonstrated proficiency, MATH 125, or MATH 141.
A first course in statistics with emphasis on regression analysis and its applications in economics and management. Not open to students who have taken MATH 209 or MATH 309. *Jaqua.*

**OR**

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

**OR**

### MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

# Business, B.A.

## Requirements for Business Major

## A Minimum of 10 Units Including:

### E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

### E&M 102: The Economy and Financial Markets

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the macroeconomy and macroeconomic models with special emphasis on the role of financial markets, interest rates, the Federal Reserve, monetary and fiscal policy, and money and capital markets. *Hooks, Li.*

### E&M 211: Financial Accounting

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the world of business and accounting. Emphasis on understanding the concepts of net income, cash flow and financial condition. Communication of economic results through financial statements and reports. Development of analytical skills used in evaluating business success. Not open to first-year students. *Bedient, Carlson.*

**AND**

### E&M 201: Intermediate Microeconomics

(1 Unit)
Prerequisites: E&M 101: and MATH 120 or demonstrated proficiency, MATH 125, or MATH 141.
Theoretical analysis of consumer choice theory and demand, production and cost, the firm and market organization, distribution and general equilibrium, game theory. *Jaqua.*

**OR**

### E&M 209: Intermediate Microeconomics with Calculus

(1 Unit)
Prerequisite: E&M 101 and MATH 141 or permission of instructor.
A more rigorous version of E&M 201 for students pursuing the mathematics/economics major and for others with the necessary math background by permission. Not offered every year. *Jaqua.*

**OR**

### E&M 202: Intermediate Macroeconomics

(1 Unit)
Prerequisites: E&M 101; E&M 102; and MATH 120 ro demonstrated proficiency, MATH 125, or MATH 141.
The development of macroeconomic theory and its application to government policy toward unemployment, inflation and growth. *Hooks, Li.*

**AND**

## Plus One Course From Each of the Following Lists:

## Management List

### E&M 259: Managing People and Organizations

(1 Unit)
Prerequisite: Sophomore standing.
An introduction to organizational behavior, including analysis at the level of the individual group or team, and organization. Topics addressed include employee attitudes and job satisfaction, managerial decision making and problem solving, managing teams, conflict and negotiation, leadership, and organizational culture and design. *Baker, staff.*

### E&M 355: Human Resource Management

(1 Unit)
Prerequisite: Junior or senior standing.
An overview of personnel management, with an emphasis on the needs of the general manager rather than the personnel specialist. Topics include employee motivation, job enrichment, labor relations, grievances and discipline, recruitment and selection, equal employment opportunity, performance appraisal, compensation and employee benefits. *Baker, Saltzman.*

### E&M 358: Management Consulting

(1 Unit)
Prerequisite: Junior or senior standing.
Prior courses related to management are recommended but not required. The role of management consultants in diagnosing organizational problems and developing action plans that can be effectively implemented. Students work on

a team-based management consulting project for a community organization to gain "real world" experience and to develop interpersonal, communication and analytical skills. Teams address issues such as strategy, organizational structure, leadership development or process efficiency. Not offered every year. *Baker.*

### E&M 359: Management

(1 Unit)
Prerequisite: Junior or senior standing, or permission of instructor.
An introduction to current management theory and practice. Traditional managerial functions such as planning, organizing and controlling are studied and contrasted with newer cross-functional approaches. *Baker, Bedient.*

### E&M 362: International Management

(1 Unit)
Prerequisite: Junior or senior standing.
Cross-cultural, ethical and social issues related to doing business abroad. Corporate strategy and structure, communication, negotiation, human resources and marketing in multinational operations. Not offered every year. *Baker.*

### E&M 352: Negotiation and Dispute Resolution

(1 Unit)
Prerequisite: Junior or senior standing, or permission of instructor.
An introductory study of the theories and concepts related to negotiation and dispute resolution developed in such fields as microeconomics, psychology and industrial relations. Includes many role-playing exercises to provide students with practice in negotiation. *Saltzman.*

### PSYC 346: Industrial and Organizational Psychology

(1 Unit)
Prerequisites: PSYC 101 or E&M 101 and PSYC 204 or E&M 200, or permission of instructor.
Focuses on personnel selection, evaluation and employee training and development. Emphasizes criterion development, motivation, job satisfaction, leadership and conflict resolution in industrial and organizational settings. *Christopher, Staff.*

## Finance List

### E&M 248: Financial Modeling with Excel

(1 Unit)
Introduction to Excel and the application of Excel to finance. Includes use of Excel to model various financial concepts and apply these concepts to real world situations. *Bedient, Hooks.*

### E&M 344: Portfolio Theory

(1 Unit)
Prerequisite: E&M 102.
An overview of the characteristics and analysis of individual security returns, and the theory and practice of optimally combining securities into portfolios. Examines the equilibrium pricing of securities in the context of the capital asset

pricing model, and the risk/return relationship of both individual securities and portfolios, as well as the recent attack on the CAPM and the implications for efficient markets. Not offered every year. *Hooks.*

### E&M 348: Financial Management

(1 Unit)
Prerequisite: E&M 101.
A survey course covering principles of corporate financial management. Topics include working capital management, agency theory, capital budgeting, capital structure, divided policy, financial analysis and selected topics. *Hooks.*

### E&M 365: International Finance

(1 Unit)
Prerequisite: E&M 102.
International macroeconomics. Particular attention is paid to the relationship among exchange rates, balance of payments, international capital flows and macroeconomic equilibrium. Eurocurrency markets and alternative international monetary systems are also examined. Particular attention is paid to the relationship among exchange rates, balance of payments, international capital flows and macroeconomic equilibrium. *Li.*

### E&M 346: Financial Markets

(1 Unit)
Prerequisite: E&M 102.
An examination of the way in which the market transfers resources from those with a surplus to those with a deficit. Students study both the theory of efficient transfer and the financial institutions and instruments which facilitate this transfer. Topics include the analysis of equity markets, fixed income markets and derivative markets. *Hooks.*

## Marketing List

### COMM 205: Mass Communication

(1 Unit)
An introduction to the different modes of mass communication--from the printing press to the Internet--from historical and cultural perspectives in order to understand the impact of mass communication on society. Topics include mass communication's production and reproduction of cultural mores and values, and the controversy surrounding media "effects." *Staff.*

### COMM 215: Social Media

(1 Unit)
An Examination of social media and the role in communication today. Students investigate social media elements, media and interpersonal communication theories, communication stratigies, and socio-cultural implications of social media. Topics include social media production and reproduction of cultural mores and values, consumption patterns of social media content, and implication of McLuhan's "the medium is the message" perspective.

### COMM 306: Public Relations

(1 Unit)
A theoretical and practical examination of the public relations field, including internal and external communications as well as media relations. Students occasionally gain practical experience by participating in a major campaign. *Staff.*

## E&M 220: Marketing Principles

(1 Unit)
Prerequisite: E&M 101 .  PSYC 101 recommended.
An introduction to the role that product, price, promotion, and distribution play in marketing strategy and implementation.  Addresses buyer behavior, market segmentation, and competititve positioning.  Provides background needed for all 300-level marketing courses. *Yayla*

Ethics List

## PHIL 301: Environmental Ethics

(1 Unit)
Examines theoretical and practical perspectives on ethical issues in relation to the environment. The theoretical issues range from whether we should assign moral value to species other than the human (and if so, on the basis of what criteria) to whether we have moral obligations to preserve the environment for future generations (and if so, what this would imply for the present generations). The practical issues range from creating incentives for restricting population growth without abdicating responsibilities toward the world's hungry, to the issue of what short-and long-term policies and practices need to be adopted to deal effectively with reducing pollution and hazardous waste while working toward a recycling, sustainable global society. *Madhok.*

## PHIL 302: Leadership Ethics

(1 Unit)
Examines the ethical foundations of leadership. Involves an in-depth discussion of foremost leadership theories and their applications to different contexts; critically examines the morally distinct aspects of leadership by looking at the relationships among power, self-interest, and morality; and analyzes leadership from within the ethical frameworks of virtue, duty, and utility along with discussing the ethical challenges of diversity (culture relativism, race, and gender) to traditional leadership ethics. *Madhok.*

## PHIL 303: Business Ethics

(1 Unit)
An examination of selected moral problems posed by corporate conduct—e.g., profit-maximization vs. social responsibility, corporate crime and the criminal justice system, business vs. environmental concerns, preferential hiring vs. reverse discrimination, employee autonomy vs. corporate loyalty, deception vs. honesty in advertising, corporate vs. government regulation. Clarification and critical examination of different ethical perspectives for resolving these moral dilemmas. *Madhok.*

## PHIL 304: Ethics and Public Policy

(1 Unit)
Emphasizes the ethical foundations of public policy. Rights, obligations, justice, autonomy, the nature of the good life: should these play a role in determining public policy, and if so, how? Focuses on the interaction between ethical values and public policy in areas such as health care, law, government, foreign policy, citizenship, education and media. *Madhok.*

## PHIL 306: Neuroscience and Ethics

(1 Unit)
An introduction to the dialogue that has developed between cognitive neuroscientists and moral philosophers. Cognitive neuroscience brings to the study of ethics an interest in the way the brain processes information and in the kinds of brain states that subserve thought and action—in short, it is answering the question of what kind of information-processing creatures we are. *Madhok.*

### PHIL 308: Biomedical Ethics

(1 Unit)
The application of major ethical theories to some of the moral problems raised by recent developments in medical technology. Does increased medical knowledge (the end) justify experimentation with human subjects (the means)? How much should a patient be told and who decides? Do parents have the right to give birth to a defective infant and thereby apparently pollute the gene pool? To whom is the genetic counselor responsible—fetus, parent, future generations? Is there a right to die? Who should be the ultimate decision-maker—physician, patient, pastor? Is health care a right or a privilege? In answering these dilemmas, are there any moral rules to follow or does each person decide what is best in the situation? *Madhok.*

### PHIL 309: International Ethics and Global Development

(1 Unit)
Explores the ethics of development in an international context. What should development be? Who should play a role in bringing about development? Examines multiple answers to these questions via an understanding of global development ethical theories and approaches such as the basic human needs approach, the human rights approach, the theory of development as freedom, the capabilities approach, theories of justice, as well as utilitarianism and deontological approaches. Applies these development ethics frameworks to important international issues such as poverty, gender inequality, violence and insecurity, over-consumption and globalization. *Madhok.*

## All Courses for the Major Must Be Taken for a Numerical Grade

## Three Cognates:

### MATH 120: College Algebra

(1 Unit)
Prerequisites: 2.0 or higher in MATH 100 or equivalent, or appropriate score on the mathematics placement assessment.
A modern, unified approach to algebra and analytical geometry based on the concept of a function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Together with MATH 127 , serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of algebra, trigonometry and logarithms should elect MATH 141 in place of MATH 120. A graphing calculator is required. Not open to students who have completed MATH 125 . A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff*

**OR**

### MATH 125: Precalculus

(1 Unit)
Prerequisite: 2.0 or higher in Math 100 or appropriate score on teh mathematics placement assessment.
A modern, unified approach to algebra, trigonometry, logarithms and analytical geometry based on the concept of a

function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions, trigonometric and inverse trigonometric functions, and analytic geometry (the circle, the parabola, the ellipse and the hyperbola) are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of algebra, trigonometry and logarithms should elect MATH 141 in place of Mathematics 125. A graphing calculator is required. Not open to students who have completed Math 120. *Staff.*

**OR**

## MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

(or higher or demonstrated proficiency)

**AND**

## E&M 200: Economic Statistics

(1 Unit)
Prerequisite: Math 120 or demonstrated proficiency, MATH 125, or MATH 141.
A first course in statistics with emphasis on regression analysis and its applications in economics and management. Not open to students who have taken MATH 209 or MATH 309. *Jaqua.*

**OR**

## MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

**OR**

## MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected

from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

**AND**

## In Addition

It is recommended that individuals interested in graduate study in business or management take:

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## Note

Because of the increased globalization of the U. S. economy, all majors are encouraged to participate in approved off-campus study programs. For a list of approved programs, consult with the Center for International Education.

# Economics and Management, B.A.

## Requirements for Economics and Management Major (8 units)

### A Minimum of Eight Units in Economics and Management, Including:

The following list and three additional units in economics and management (one must be at the 300-level). Unless approved by the department in advance, E&M 201 and E&M 202 must be taken at Albion College. The eight units used to fulfill major requirements must be taken for a numerical grade. It is recommended that all courses taken in the department by majors be taken for a numerical grade, except those offered only on a credit/no credit basis. Normally, students will enroll in E&M 101 in either the first or second semester and E&M 102 in the semester after E&M 101.

E&M 211 is not open to first semester freshmen but is normally taken in either the second or third semester. E&M 201 or E&M 209 and E&M 202 should be taken in the second year along with the statistics cognate requirement. It is recommended that students planning a major in economics enroll in MATH 125 or calculus during their first year. Seniors may be required to participate in a senior assessment exercise...

## E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

## E&M 102: The Economy and Financial Markets

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the macroeconomy and macroeconomic models with special emphasis on the role of financial markets, interest rates, the Federal Reserve, monetary and fiscal policy, and money and capital markets. *Hooks, Li.*

## E&M 201: Intermediate Microeconomics

(1 Unit)
Prerequisites: E&M 101: and MATH 120 or demonstrated proficiency, MATH 125, or MATH 141.
Theoretical analysis of consumer choice theory and demand, production and cost, the firm and market organization, distribution and general equilibrium, game theory. *Jaqua.*

**OR**

## E&M 209: Intermediate Microeconomics with Calculus

(1 Unit)
Prerequisite: E&M 101 and MATH 141 or permission of instructor.
A more rigorous version of E&M 201 for students pursuing the mathematics/economics major and for others with the necessary math background by permission. Not offered every year. *Jaqua.*

## E&M 202: Intermediate Macroeconomics

(1 Unit)
Prerequisites: E&M 101; E&M 102; and MATH 120 ro demonstrated proficiency, MATH 125, or MATH 141.
The development of macroeconomic theory and its application to government policy toward unemployment, inflation and growth. *Hooks, Li.*

## E&M 211: Financial Accounting

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the world of business and accounting. Emphasis on understanding the concepts of net income, cash flow and financial condition. Communication of economic results through financial statements and reports. Development of analytical skills used in evaluating business success. Not open to first-year students. *Bedient, Carlson.*

## The Following Cognate Areas Must Be Completed for a Major:

### MATH 120: College Algebra

(1 Unit)
Prerequisites: 2.0 or higher in MATH 100 or equivalent, or appropriate score on the mathematics placement assessment.
A modern, unified approach to algebra and analytical geometry based on the concept of a function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Together with MATH 127 , serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of algebra, trigonometry and logarithms should elect MATH 141 in place of MATH 120. A graphing calculator is required. Not open to students who have completed MATH 125 . A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff*

OR

### MATH 125: Precalculus

(1 Unit)
Prerequisite: 2.0 or higher in Math 100 or appropriate score on teh mathematics placement assessment.
A modern, unified approach to algebra, trigonometry, logarithms and analytical geometry based on the concept of a function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions, trigonometric and inverse trigonometric functions, and analytic geometry (the circle, the parabola, the ellipse and the hyperbola) are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of algebra, trigonometry and logarithms should elect MATH 141 in place of Mathematics 125. A graphing calculator is required. Not open to students who have completed Math 120. *Staff.*

OR

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

(or higher or demonstrated proficiency)

It is recommended that this math cognate be completed in students' first or second semester at Albion College.

## One Statistics Course From:

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

### MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

### E&M 200: Economic Statistics

(1 Unit)
Prerequisite: Math 120 or demonstrated proficiency, MATH 125, or MATH 141.
A first course in statistics with emphasis on regression analysis and its applications in economics and management. Not open to students who have taken MATH 209 or MATH 309. *Jaqua.*

## In Addition

It is recommended that individuals interested in graduate study in business or management take MATH 141 and MATH 143. Individuals contemplating graduate study in economics should complete the mathematics/economics major.

Because of the increased globalization of the U. S. economy, all majors are encouraged to participate in approved off-campus study programs. For a list of approved programs, consult with the Center for International Education.

# Economics and Management, Human Resources Emphasis, B.A.

## Requirements for Economics and Management Major With Emphasis (10 Units)

- The 9-10 units used to fulfill major with emphasis requirements must be taken for a numerical grade.

## A Minimum of 10 Units in Economics and Management

(nine for the emphasis in international business and international economics), including the following list. Unless approved by the department in advance, E&M 201 and E&M 202 must be taken at Albion College.

### E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

### E&M 102: The Economy and Financial Markets

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the macroeconomy and macroeconomic models with special emphasis on the role of financial markets, interest rates, the Federal Reserve, monetary and fiscal policy, and money and capital markets. *Hooks, Li.*

### E&M 211: Financial Accounting

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the world of business and accounting. Emphasis on understanding the concepts of net income, cash flow and financial condition. Communication of economic results through financial statements and reports. Development of analytical skills used in evaluating business success. Not open to first-year students. *Bedient, Carlson.*

### E&M 201: Intermediate Microeconomics

(1 Unit)
Prerequisites: E&M 101: and MATH 120 or demonstrated proficiency, MATH 125, or MATH 141.
Theoretical analysis of consumer choice theory and demand, production and cost, the firm and market organization, distribution and general equilibrium, game theory. *Jaqua.*

### E&M 202: Intermediate Macroeconomics

(1 Unit)
Prerequisites: E&M 101; E&M 102; and MATH 120 ro demonstrated proficiency, MATH 125, or MATH 141.
The development of macroeconomic theory and its application to government policy toward unemployment, inflation and growth. *Hooks, Li.*

## The Following Cognates Must Be Completed for a Major With Emphasis:

### MATH 120: College Algebra

(1 Unit)
Prerequisites: 2.0 or higher in MATH 100 or equivalent, or appropriate score on the mathematics placement assessment.
A modern, unified approach to algebra and analytical geometry based on the concept of a function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Together with MATH 127 , serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of algebra, trigonometry and logarithms should elect MATH 141 in place of MATH 120. A graphing calculator is required. Not open to students who have completed MATH 125 . A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff*

OR

## MATH 125: Precalculus

(1 Unit)
Prerequisite: 2.0 or higher in Math 100 or appropriate score on teh mathematics placement assessment.
A modern, unified approach to algebra, trigonometry, logarithms and analytical geometry based on the concept of a function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions, trigonometric and inverse trigonometric functions, and analytic geometry (the circle, the parabola, the ellipse and the hyperbola) are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of algebra, trigonometry and logarithms should elect MATH 141 in place of Mathematics 125. A graphing calculator is required. Not open to students who have completed Math 120. *Staff.*

OR

## MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

(or higher as demonstrated by proficiency)

It is recommended that this math cognate be completed in students' first or second semester at Albion College.

# One Statistics Course From:

## MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

## MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

### E&M 200: Economic Statistics

(1 Unit)
Prerequisite: Math 120 or demonstrated proficiency, MATH 125, or MATH 141.
A first course in statistics with emphasis on regression analysis and its applications in economics and management. Not open to students who have taken MATH 209 or MATH 309. *Jaqua.*

## A Focused Selection of Courses Chosen From Among the Emphases Listed Below.

## Emphasis in Human Resources

### E&M 259: Managing People and Organizations

(1 Unit)
Prerequisite: Sophomore standing.
An introduction to organizational behavior, including analysis at the level of the individual group or team, and organization. Topics addressed include employee attitudes and job satisfaction, managerial decision making and problem solving, managing teams, conflict and negotiation, leadership, and organizational culture and design. *Baker, staff.*

### E&M 374: Labor Economics

(1 Unit)
Prerequisite: E&M 101.
An investigation of labor market decisions and outcomes; topics include labor supply and demand, earnings, discrimination and unemployment. Not offered every year. *Saltzman.*

### E&M 355: Human Resource Management

(1 Unit)
Prerequisite: Junior or senior standing.
An overview of personnel management, with an emphasis on the needs of the general manager rather than the personnel specialist. Topics include employee motivation, job enrichment, labor relations, grievances and discipline, recruitment and selection, equal employment opportunity, performance appraisal, compensation and employee benefits. *Baker, Saltzman.*

### PSYC 101: Introduction to Psychology

(1 Unit)
An introduction to psychology's major areas of study, theoretical approaches, empirical findings, and research methodologies. Provides students with a broad overview of the field of psychology and examines the nature of psychology as a discipline. Addresses Psychology's major sub-disciplines, which range from the borders of biology to the borders of computer science to the borders of sociology. Introduction to Psychology is a prerequisite for all other psychology courses. *Staff.*

## Plus One Unit Selected From the Following:

### E&M 351: Women in Business and Leadership

(1 Unit)
Prerequisite: Junior or senior standing.
Historical and contemporary perspectives on the expanding role of women in leadership positions, both in business and in other realms, such as politics. Extensive classroom discussions and use of case studies. Issues addressed include equal pay, work-family balance, the "opt-out myth," challenges women face in various industries or occupations, and the role of corporations in hindering or supporting women's advancement. *Baker*.

### E&M 353: Labor Law, Unions and Management

(1 Unit)
Prerequisite: Sophomore standing or permission of instructor.
Labor history, labor law, union-management relations, comparative labor movements. Student participation in a collective bargaining game. Not offered every year. *Saltzman.*

### E&M 352: Negotiation and Dispute Resolution

(1 Unit)
Prerequisite: Junior or senior standing, or permission of instructor.
An introductory study of the theories and concepts related to negotiation and dispute resolution developed in such fields as microeconomics, psychology and industrial relations. Includes many role-playing exercises to provide students with practice in negotiation. *Saltzman.*

### PSYC 346: Industrial and Organizational Psychology

(1 Unit)
Prerequisites: PSYC 101 or E&M 101 and PSYC 204 or E&M 200, or permission of instructor.
Focuses on personnel selection, evaluation and employee training and development. Emphasizes criterion development, motivation, job satisfaction, leadership and conflict resolution in industrial and organizational settings. *Christopher, Staff.*

# Economics and Management, International Business and International Economics Emphasis, B.A.

## Requirements for Economics and Management Major With Emphasis (10 Units)

- The 9-10 units used to fulfill major with emphasis requirements must be taken for a numerical grade.

## A Minimum of 10 Units in Economics and Management

(nine for the emphasis in international business and international economics), including the following list. Unless approved by the department in advance, E&M 201 and E&M 202 must be taken at Albion College.

### E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of

prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

### E&M 102: The Economy and Financial Markets

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the macroeconomy and macroeconomic models with special emphasis on the role of financial markets, interest rates, the Federal Reserve, monetary and fiscal policy, and money and capital markets. *Hooks, Li.*

### E&M 211: Financial Accounting

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the world of business and accounting. Emphasis on understanding the concepts of net income, cash flow and financial condition. Communication of economic results through financial statements and reports. Development of analytical skills used in evaluating business success. Not open to first-year students. *Bedient, Carlson.*

### E&M 201: Intermediate Microeconomics

(1 Unit)
Prerequisites: E&M 101: and MATH 120 or demonstrated proficiency, MATH 125, or MATH 141.
Theoretical analysis of consumer choice theory and demand, production and cost, the firm and market organization, distribution and general equilibrium, game theory. *Jaqua.*

### E&M 202: Intermediate Macroeconomics

(1 Unit)
Prerequisites: E&M 101; E&M 102; and MATH 120 ro demonstrated proficiency, MATH 125, or MATH 141.
The development of macroeconomic theory and its application to government policy toward unemployment, inflation and growth. *Hooks, Li.*

## The Following Cognates Must Be Completed for a Major With Emphasis:

### MATH 120: College Algebra

(1 Unit)
Prerequisites: 2.0 or higher in MATH 100 or equivalent, or appropriate score on the mathematics placement assessment.
A modern, unified approach to algebra and analytical geometry based on the concept of a function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Together with MATH 127 , serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of algebra, trigonometry and logarithms should elect MATH 141 in place of MATH 120. A graphing calculator is required. Not open to students who have completed MATH 125 . A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff*

OR

### MATH 125: Precalculus

(1 Unit)
Prerequisite: 2.0 or higher in Math 100 or appropriate score on teh mathematics placement assessment.
A modern, unified approach to algebra, trigonometry, logarithms and analytical geometry based on the concept of a function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions, trigonometric and inverse trigonometric functions, and analytic geometry (the circle, the parabola, the ellipse and the hyperbola) are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of algebra, trigonometry and logarithms should elect MATH 141 in place of Mathematics 125. A graphing calculator is required. Not open to students who have completed Math 120. *Staff.*

OR

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

(or higher as demonstrated by proficiency)

It is recommended that this math cognate be completed in students' first or second semester at Albion College.

## One Statistics Course From:

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

### MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

### E&M 200: Economic Statistics

(1 Unit)
Prerequisite: Math 120 or demonstrated proficiency, MATH 125, or MATH 141.
A first course in statistics with emphasis on regression analysis and its applications in economics and management. Not open to students who have taken MATH 209 or MATH 309. *Jaqua.*

# A Focused Selection of Courses Chosen From Among the Emphases Listed Below.

## Emphasis in International Business and International Economics

### Two Units Selected From:

#### E&M 362: International Management

(1 Unit)
Prerequisite: Junior or senior standing.
Cross-cultural, ethical and social issues related to doing business abroad. Corporate strategy and structure, communication, negotiation, human resources and marketing in multinational operations. Not offered every year. *Baker.*

#### E&M 363: The Chinese Economy

(1 Unit)
Prerequisites: E&M 101, E&M 102.
An examination of economic policy and institutions in China since 1949. Topics include the Communist economic system adopted under Mao, the transition to a more market-oriented system beginning in 1978, sustainability of rapid economic growth, the banking and financial system, foreign trade and investment, labor market reforms, the social safety net, and rural economic development. *Li.*

#### E&M 365: International Finance

(1 Unit)
Prerequisite: E&M 102.
International macroeconomics. Particular attention is paid to the relationship among exchange rates, balance of payments, international capital flows and macroeconomic equilibrium. Eurocurrency markets and alternative international monetary systems are also examined. Particular attention is paid to the relationship among exchange rates, balance of payments, international capital flows and macroeconomic equilibrium. *Li.*

#### E&M 366: International Trade

(1 Unit)
Prerequisite: E&M 101.
International microeconomics. Study of models explaining trade patterns between countries. Analysis of industry-level trade policy issues including the effects of tariffs, quotas and other restrictions; international competition among large firms; technological change; and free trade areas. *Li.*

### Plus One Unit Selected From the Following:

## E&M 212: Managerial and Cost Accounting

(1 Unit)
Prerequisite: E&M 211 or permission of instructor.
Development and use of accounting information for effective managerial control and decision-making within a complex organization. Topics include cost behavior, profit planning, cost accounting (including job order, process and activity-based), just-in-time inventory control, standard costs and budgetary control. *Bedient, Carlson.*

## E&M 259: Managing People and Organizations

(1 Unit)
Prerequisite: Sophomore standing.
An introduction to organizational behavior, including analysis at the level of the individual group or team, and organization. Topics addressed include employee attitudes and job satisfaction, managerial decision making and problem solving, managing teams, conflict and negotiation, leadership, and organizational culture and design. *Baker, staff.*

## E&M 345: Money and Banking

(1 Unit)
Prerequisite: E&M 102.
Focuses on the Federal Reserve and its attempts to promote maximum sustainable economic growth. Other topics include the nature of money, the determination of interest rates, the financial system and financial institution operations, the structure of the Federal Reserve and the macroeconomics of inflation and growth. *Hooks, Li.*

## E&M 348: Financial Management

(1 Unit)
Prerequisite: E&M 101.
A survey course covering principles of corporate financial management. Topics include working capital management, agency theory, capital budgeting, capital structure, divided policy, financial analysis and selected topics. *Hooks.*

## E&M 359: Management

(1 Unit)
Prerequisite: Junior or senior standing, or permission of instructor.
An introduction to current management theory and practice. Traditional managerial functions such as planning, organizing and controlling are studied and contrasted with newer cross-functional approaches. *Baker, Bedient.*

## E&M 346: Financial Markets

(1 Unit)
Prerequisite: E&M 102.
An examination of the way in which the market transfers resources from those with a surplus to those with a deficit. Students study both the theory of efficient transfer and the financial institutions and instruments which facilitate this transfer. Topics include the analysis of equity markets, fixed income markets and derivative markets. *Hooks.*

## E&M 352: Negotiation and Dispute Resolution

(1 Unit)
Prerequisite: Junior or senior standing, or permission of instructor.
An introductory study of the theories and concepts related to negotiation and dispute resolution developed in such fields as microeconomics, psychology and industrial relations. Includes many role-playing exercises to provide students with practice in negotiation. *Saltzman.*

## Additional Requirements

The major with emphasis in international business and international economics requires, in addition to the preceding, completion of an off-campus study program or internship in a foreign country, plus one course from the following:

### ANTH 238: South Asian Identities

(1 Unit)
ANTH 105 or SOC 101 or permission of instructor. ANTH 105 or SOC 101 or permission of instructor.
An introduction to the peoples and cultures of South Asia (Sri Lanka, India, Pakistan, Bangladesh, Nepal and Bhutan). Examines issues including caste, South Asian religions, family life, colonialism, communal violence, popular culture and the South Asian diaspora. *Chase.*

### ANTH 248: Global Africa

(1 Unit)
Prerequisite: SOC 101 or ANTH 105, or permission of instructor.
A survey of African cultural diversity past and present. Explores the lives and livelihoods of African peoples through ethnographic case studies that span the continent. Engages stereotypes and challenges the ways in which Africa is popularly depicted in the media. Considers key issues in anthropology, including colonialism, conflict, ecology, economic development, food security, gender, childhood, religion, health, humanitarianism and globalization. *Harnish.*

### COMM 213: Intercultural Communication

(1 Unit)
An exploration of the role communication plays in defining and sustaining culture both globally and locally. By applying current research and theories in intercultural communication, students are introduced to major topics pertaining to communication between cultures. Topics include, but are not limited to: the way a culture's deep meaning structure impacts the way people communicate, culture-specific verbal and nonverbal norms, advice on verbal and nonverbal behavior when doing business internationally, adjusting to culture shock and exploring various subcultures in the United States. *Erlandson.*

### HIST 103: Making Europe Modern: 1500 - Present

(1 Unit)
Europe from the Renaissance to the end of the twentieth century. Major topics include: Wars of Religion, French and Industrial Revolutions, and war and peace in the twentieth century. *Brade.*

### HIST 111: East Asia: Cultures and Civilizations

(1 Unit)
A survey of the cultural, political and economic interactions among the societies of East Asia from the sixth century to the present, with an emphasis on the history of China, Japan and Korea. Major themes include the historical

construction of "East Asian" regional identity; traditional culture; imperialism and colonialism; nationalist movements; and the debate over "Asian values" and modern economic development. *Ho.*

## HIST 142: Modern Latin America History

(1 Unit)
An introduction to Latin America from independence in the 1820s to the present. Native Americans, slaves and European immigrants struggled with elites to form societies of "order and progress." Films and oral histories show how the world economy affected working men and women and their responses: revolutions, religion, nationalism and popular politics. *Kanter.*

## HIST 217: Europe's Age of Revolutions: The 19th Century

(1 Unit)
Europe from the French and Industrial Revolutions to the end of the First World War as reflected in history, literature and film. *Brade.*

## HIST 218: Europe's World Wars and Cold Wars: The 20th Century

(1 Unit)
Europe from the end of the First World War to the end of its Cold War partition reflected in history, literature and film. *Brade.*

## HIST 263: Modern China

(1 Unit)
Analyzes the major events, ideologies and individuals that have shaped Chinese state and society from 1644 to the present. Major themes include Confucianism and traditional culture; foreign imperialism and nationalism; the Maoist years; and political dissent and social change in the 1980s and 1990s. Same as ANTH 263. *Staff.*

## HIST 264: An International History of Modern Japan

(1 Unit)
Same as INTN 264. *Yoshii.*

## HIST 309: Pax Britannica: The British Empire

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
An exploration of the varied, complex and fascinating phenomenon that was the British Empire from its late eighteenth-century crisis, through its unparalleled global predominance in the nineteenth century, to its dissolution/transformation in the middle years of the twentieth century. *Staff.*

## HIST 313: 1815 Russia 1945

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.

Russia from the end of the Napoleonic Wars to the end of the Second World War: the collapse of the tsarist autocracy, the Bolshevik revolution, and Russia's struggles within itself and against the outside world. *Staff*

## HIST 382: STEM in East Asian History

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Explores the broad impacts of science, technology, environment, and medicine across East Asia from premodern periods to the present-day. We will investigate the ways in which the human body, space and place, and material-environmental interactions (ranging from manipulations of waterways to climate change) transformed East Asian and global histories. The course will focus on multidisciplinary, comparative approaches and topics including gendered forms of medicine and technology, regional and transnational environmental issues (natural, man-made, or both), and information flows between Asia and the world. *Ho.*

## HIST 390: Modern Germany

(1 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
This seminar focuses on the shifting constructions of German national identity in the twentieth century. We will consider World War I, the Weimar and Nazi eras, Cold War divisions, and reunification. Topics include nationhood, ethnicity, war and genocide. *Brade.*

## INTN 130: Introduction to International Studies

(1 Unit)
Introduces concepts of international studies with historical examples. Students are required to observe and analyze developments within a certain region, area, country or organization throughout the semester. *Yoshii.*

## INTN 264: An International History of Modern Japan

(1 Unit)
Surveys the history of Japan from the seventeenth to the twenty-first century, with special emphasis on how cultural, military, political, and economic interactions with other countries have influenced Japan's national policies and cultural identity over time. Topics range from historical relations with China and Korea, the influence of seventeenth century "Dutch learning," U.S., European, and Russian imperialism in the nineteenth century, Japanese expansion into Asia during the early twentieth century, U.S.-Japan relations during and after World War II, and immigration and population in the twenty-first century. Same as History 264. *Yoshii.*

## INTN 300: Power and Culture in the Asia-Pacific Region

(1 Unit)
Introduces the diversity and development of the Asia-Pacific region that includes countries with traditions of Confucianism, Marxist-Leninist ideology, Western liberalism and Islam. Begins with a historical survey of the political, economic and social development of the region, followed by students' discussions of the prospect of the Asia-Pacific region growing into something similar to the European Community. Special attention is paid to the role of the U.S., an Asia-Pacific country, in this region. *Yoshii.*

## MLAC 305: Intercultural Understanding and Global Issues

(1 Unit)
Explores theoretical models of how cultures are derived and what it means to interact across cultural boundaries. Applies these theoretical models to selected global issues in order to demonstrate the potentialities and hazards of negotiation of global issues across borders. Useful for pre-professional students who want to attain the skills and knowledge to effectively function in an international/intercultural context. Taught in English. *Myers*

## PHIL 303: Business Ethics

(1 Unit)
An examination of selected moral problems posed by corporate conduct—e.g., profit-maximization vs. social responsibility, corporate crime and the criminal justice system, business vs. environmental concerns, preferential hiring vs. reverse discrimination, employee autonomy vs. corporate loyalty, deception vs. honesty in advertising, corporate vs. government regulation. Clarification and critical examination of different ethical perspectives for resolving these moral dilemmas. *Madhok.*

## PHIL 309: International Ethics and Global Development

(1 Unit)
Explores the ethics of development in an international context. What should development be? Who should play a role in bringing about development? Examines multiple answers to these questions via an understanding of global development ethical theories and approaches such as the basic human needs approach, the human rights approach, the theory of development as freedom, the capabilities approach, theories of justice, as well as utilitarianism and deontological approaches. Applies these development ethics frameworks to important international issues such as poverty, gender inequality, violence and insecurity, over-consumption and globalization. *Madhok.*

## PLSC 336: International Relations

(1 Unit)
Prerequisites: PLSC 100 and one of either PLSC 102 or PLSC 103.
A study of the behavior of nations, including topics such as: national power, balance of power, deterrence, diplomacy, collective security, international law, international organization and disarmament. *Grossman, Walling.*

## PLSC 338: International Political Economy

(1 Unit)
Prerequisites: PLSC 100 and one of either PLSC 102 or PLSC 103.
An introduction to the study of political economy, i.e., the reciprocal relationship between political and economic activities and institutions, through an examination of the pursuit of wealth and power in the international system. Considers the strengths and weaknesses of different theoretical, analytical and ideological approaches to understanding the international political economy in both historical and contemporary settings. Specific issues include trade, international finance, foreign investment, economic development, structural adjustments and globalization. *Grossman.*

## PLSC 352: The Comparative Politics of Developing Nations

(1 Unit)
Prerequisites: PLSC 100 and one of either PLSC 102 or PLSC 103.
A survey of the principal arguments about global inequality and the developmental paths of countries outside the industrialized West. Includes an examination of the roles major powers and international and non-governmental organizations have played in the political and economic histories of developing countries. *Dabney.*

## RS 102: Introduction to Eastern Religions

(1 Unit)
An introduction to major Eastern religions as represented by Hinduism, Buddhism, Confucianism, Taoism and Shinto. Topics include the nature of religion and religious experience in the East; origins and development of each major religion; sacred literature, formative myths, symbols and fundamental tenets; forms of religious expression, spirituality and worship; and the relationship to the world as seen in ethical orientations and institutions. *Valdina.*

### RS 104: Introduction to Islam

(1 Unit)
An introduction to the beliefs and practices of Islam in its various manifestations, with additional emphasis on the history, politics and gender issues that have both influenced and been influenced by Islam. Analyzes the information, and misinformation, on Islam as presented in the news media and on the Internet. *Valdina.*

### RS 204: Islam and the Modern World

(1 Unit)
An examination of ideas and movements related to Islam's interaction with the West in the modern period, including Muslim intellectual responses to issues like colonialism, modernism, secularism, nationalism, democracy, science and women's rights. Also includes political developments in certain Islamic countries. *Valdina.*

### RS 211: Hinduism

(1 Unit)
Indian philosophical world views, ritual expressions and moral orientations: Vedas, Upanishads, Bhagavad Gita, Vedanta. Offered occasionally. *Valdina.*

### RS 212: Buddhism

(1 Unit)
Spring Indian, Chinese and Japanese philosophical world views, ritual expressions and moral orientations. Theravada, Mahayana, Ch'an, Zen. Offered occasionally. *Valdina.*

## Note

A student may declare only one economics and management major with emphasis, even if the student completes the requirements for more than one emphasis.

Additional information on the Economics and Management major can be found in this program flyer (PDF).

# Economics Minor

## Information on Minors

The minors in accounting, economics, finance, management, and marketing management are not open to students with a major in the Economics and Management Department.

Students may not choose more than one minor in the Economics and Management Department.

All courses for the minor must be taken for a numerical grade, except those offered only on a credit/no credit basis.

# Requirements for Minor in Economics

## Five Units in Economics and Management, Including:

### E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

and either

### E&M 201: Intermediate Microeconomics

(1 Unit)
Prerequisites: E&M 101: and MATH 120 or demonstrated proficiency, MATH 125, or MATH 141.
Theoretical analysis of consumer choice theory and demand, production and cost, the firm and market organization, distribution and general equilibrium, game theory. *Jaqua.*

**OR**

### E&M 202: Intermediate Macroeconomics

(1 Unit)
Prerequisites: E&M 101; E&M 102; and MATH 120 ro demonstrated proficiency, MATH 125, or MATH 141.
The development of macroeconomic theory and its application to government policy toward unemployment, inflation and growth. *Hooks, Li.*

## Plus Three From:

### E&M 102: The Economy and Financial Markets

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the macroeconomy and macroeconomic models with special emphasis on the role of financial markets, interest rates, the Federal Reserve, monetary and fiscal policy, and money and capital markets. *Hooks, Li.*

### E&M 201: Intermediate Microeconomics

(1 Unit)
Prerequisites: E&M 101: and MATH 120 or demonstrated proficiency, MATH 125, or MATH 141.
Theoretical analysis of consumer choice theory and demand, production and cost, the firm and market organization, distribution and general equilibrium, game theory. *Jaqua.*

### E&M 202: Intermediate Macroeconomics

(1 Unit)
Prerequisites: E&M 101; E&M 102; and MATH 120 ro demonstrated proficiency, MATH 125, or MATH 141.

The development of macroeconomic theory and its application to government policy toward unemployment, inflation and growth. *Hooks, Li.*

## E&M 200: Economic Statistics

(1 Unit)
Prerequisite: Math 120 or demonstrated proficiency, MATH 125, or MATH 141.
A first course in statistics with emphasis on regression analysis and its applications in economics and management. Not open to students who have taken MATH 209 or MATH 309. *Jaqua.*

## E&M 273: Environmental and Natural Resource Economics

(1 Unit)
Prerequisite: E&M 101.
Economic theory is used to examine environmental and natural resource problems and policies. *Staff.*

## E&M 371: Issues in Modern Political Economy

(1 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
A non-technical course on selected legal and public policy issues related to the economy. Topics vary from term to term but could include such issues as equal employment opportunity and affirmative action, the use of economic analysis in setting public policy, and government's role in health care. Not offered every year. *Saltzman.*

## E&M 372: Government Economics and Policy

(1 Unit)
Prerequisite: E&M 101.
Application of microeconomic analysis to expenditure and revenue decisions in the public sector, including rationale for government expenditures, criteria for revenue generation and the analysis of economic effects of major taxes. Not offered every year. *Hooks.*

## E&M 344: Portfolio Theory

(1 Unit)
Prerequisite: E&M 102.
An overview of the characteristics and analysis of individual security returns, and the theory and practice of optimally combining securities into portfolios. Examines the equilibrium pricing of securities in the context of the capital asset pricing model, and the risk/return relationship of both individual securities and portfolios, as well as the recent attack on the CAPM and the implications for efficient markets. Not offered every year. *Hooks.*

## E&M 374: Labor Economics

(1 Unit)
Prerequisite: E&M 101.
An investigation of labor market decisions and outcomes; topics include labor supply and demand, earnings, discrimination and unemployment. Not offered every year. *Saltzman.*

## E&M 363: The Chinese Economy

(1 Unit)
Prerequisites: E&M 101, E&M 102.
An examination of economic policy and institutions in China since 1949. Topics include the Communist economic system adopted under Mao, the transition to a more market-oriented system beginning in 1978, sustainability of rapid economic growth, the banking and financial system, foreign trade and investment, labor market reforms, the social safety net, and rural economic development. *Li.*

## E&M 365: International Finance

(1 Unit)
Prerequisite: E&M 102.
International macroeconomics. Particular attention is paid to the relationship among exchange rates, balance of payments, international capital flows and macroeconomic equilibrium. Eurocurrency markets and alternative international monetary systems are also examined. Particular attention is paid to the relationship among exchange rates, balance of payments, international capital flows and macroeconomic equilibrium. *Li.*

## E&M 366: International Trade

(1 Unit)
Prerequisite: E&M 101.
International microeconomics. Study of models explaining trade patterns between countries. Analysis of industry-level trade policy issues including the effects of tariffs, quotas and other restrictions; international competition among large firms; technological change; and free trade areas. *Li.*

## E&M 346: Financial Markets

(1 Unit)
Prerequisite: E&M 102.
An examination of the way in which the market transfers resources from those with a surplus to those with a deficit. Students study both the theory of efficient transfer and the financial institutions and instruments which facilitate this transfer. Topics include the analysis of equity markets, fixed income markets and derivative markets. *Hooks.*

## E&M 375: Health Economics

(1 Unit)
Prerequisite: E&M 101 or permission of instructor.
A microeconomic and institutional analysis of health care services in the U.S., with particular reference to issues of cost and access. Topics include the demand for medical care, health insurance, economic regulation of hospitals, the markets for physicians and medical education, and the political economy of health care. Not offered every year. *Saltzman.*

## E&M 300: Econometrics

(1 Unit)
Prerequisite: One of the following: MATH 209, MATH 309, or E&M 200.
An introduction to empirical work in economics and management. Topics covered include: hypothesis testing, estimation, correlation, and regression and related problems. Students use statistical software to access data sources and to write an empirical paper. Topics covered include: hypothesis Not offered every year. *Jaqua*.

## E&M 309: Mathematical Economics

(1 Unit)
Prerequisites: E&M 201and at least one course in calculus.
Optimization and economic analysis, game theory and financial economics. Not offered every year. *Jaqua.*
and (with approval of the department chair)

### E&M 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

# Economics, B.A.

## Requirements for Economics Major (8 Units)

- The 8 units used to fulfill major requirements must be taken for a numerical grade.
- A minimum of 8 units in Economics & Management.
- Unless approved by the department in advance, E&M 202 and E&M 209 must be taken at Albion College.

### E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

### E&M 102: The Economy and Financial Markets

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the macroeconomy and macroeconomic models with special emphasis on the role of financial markets, interest rates, the Federal Reserve, monetary and fiscal policy, and money and capital markets. *Hooks, Li.*

### E&M 202: Intermediate Macroeconomics

(1 Unit)
Prerequisites: E&M 101; E&M 102; and MATH 120 ro demonstrated proficiency, MATH 125, or MATH 141.
The development of macroeconomic theory and its application to government policy toward unemployment, inflation and growth. *Hooks, Li.*

### E&M 209: Intermediate Microeconomics with Calculus

(1 Unit)
Prerequisite: E&M 101 and MATH 141 or permission of instructor.
A more rigorous version of E&M 201 for students pursuing the mathematics/economics major and for others with the necessary math background by permission. Not offered every year. *Jaqua.*

### E&M 300: Econometrics

(1 Unit)
Prerequisite: One of the following: MATH 209, MATH 309, or E&M 200.
An introduction to empirical work in economics and management. Topics covered include: hypothesis testing, estimation, correlation, and regression and related problems. Students use statistical software to access data sources and to write an empirical paper. Topics covered include: hypothesis Not offered every year. *Jaqua*.

## Three Units Selected from the Following:

### E&M 273: Environmental and Natural Resource Economics

(1 Unit)
Prerequisite: E&M 101.
Economic theory is used to examine environmental and natural resource problems and policies. *Staff.*

### E&M 345: Money and Banking

(1 Unit)
Prerequisite: E&M 102.
Focuses on the Federal Reserve and its attempts to promote maximum sustainable economic growth. Other topics include the nature of money, the determination of interest rates, the financial system and financial institution operations, the structure of the Federal Reserve and the macroeconomics of inflation and growth. *Hooks, Li.*

### E&M 346: Financial Markets

(1 Unit)
Prerequisite: E&M 102.
An examination of the way in which the market transfers resources from those with a surplus to those with a deficit. Students study both the theory of efficient transfer and the financial institutions and instruments which facilitate this transfer. Topics include the analysis of equity markets, fixed income markets and derivative markets. *Hooks.*

### E&M 366: International Trade

(1 Unit)
Prerequisite: E&M 101.
International microeconomics. Study of models explaining trade patterns between countries. Analysis of industry-level trade policy issues including the effects of tariffs, quotas and other restrictions; international competition among large firms; technological change; and free trade areas. *Li.*

### E&M 371: Issues in Modern Political Economy

(1 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
A non-technical course on selected legal and public policy issues related to the economy. Topics vary from term to term but could include such issues as equal employment opportunity and affirmative action, the use of economic analysis in setting public policy, and government's role in health care. Not offered every year. *Saltzman.*

### E&M 372: Government Economics and Policy

(1 Unit)
Prerequisite: E&M 101.

Application of microeconomic analysis to expenditure and revenue decisions in the public sector, including rationale for government expenditures, criteria for revenue generation and the analysis of economic effects of major taxes. Not offered every year. *Hooks.*

### E&M 374: Labor Economics

(1 Unit)
Prerequisite: E&M 101.
An investigation of labor market decisions and outcomes; topics include labor supply and demand, earnings, discrimination and unemployment. Not offered every year. *Saltzman.*

### E&M 375: Health Economics

(1 Unit)
Prerequisite: E&M 101 or permission of instructor.
A microeconomic and institutional analysis of health care services in the U.S., with particular reference to issues of cost and access. Topics include the demand for medical care, health insurance, economic regulation of hospitals, the markets for physicians and medical education, and the political economy of health care. Not offered every year. *Saltzman.*

### E&M 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*
with permission of E&M chair

## Two Required Cognates:

One Course From:

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra,

trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### MATH 245: Multivariate Calculus

(1 Unit)
Prerequisite: MATH 143.
Vectors, inner and cross products, and vector-valued functions including parametric represetations of curves and surfaces in space. Partial differentiation, the chain rule, function gradients, implicit differentiation, multivariate optimization, Lagrange multipliers, multiple integrals and vector analysis, including divergence and curl of vector fields, as well as the theorems of Green, Stokes and Gauss. *Mason.*

One Statistics Course From:

### E&M 200: Economic Statistics

(1 Unit)
Prerequisite: Math 120 or demonstrated proficiency, MATH 125, or MATH 141.
A first course in statistics with emphasis on regression analysis and its applications in economics and management. Not open to students who have taken MATH 209 or MATH 309. *Jaqua.*

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

### MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

# Finance Minor

## Information on Minors

The minors in accounting, economics, finance, management, and marketing management are not open to students with a major in the Economics and Management Department.

Students may not choose more than one minor in the Economics and Management Department.

All courses for the minor must be taken for a numerical grade, except those offered only on a credit/no credit basis.

# Requirements for Minor in Finance

## Six Units in Economics and Management, Including:

### E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

### E&M 102: The Economy and Financial Markets

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the macroeconomy and macroeconomic models with special emphasis on the role of financial markets, interest rates, the Federal Reserve, monetary and fiscal policy, and money and capital markets. *Hooks, Li.*

### E&M 211: Financial Accounting

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the world of business and accounting. Emphasis on understanding the concepts of net income, cash flow and financial condition. Communication of economic results through financial statements and reports. Development of analytical skills used in evaluating business success. Not open to first-year students. *Bedient, Carlson.*

### E&M 346: Financial Markets

(1 Unit)
Prerequisite: E&M 102.
An examination of the way in which the market transfers resources from those with a surplus to those with a deficit. Students study both the theory of efficient transfer and the financial institutions and instruments which facilitate this transfer. Topics include the analysis of equity markets, fixed income markets and derivative markets. *Hooks.*

### E&M 348: Financial Management

(1 Unit)
Prerequisite: E&M 101.
A survey course covering principles of corporate financial management. Topics include working capital management, agency theory, capital budgeting, capital structure, divided policy, financial analysis and selected topics. *Hooks.*

## Plus One From:

### E&M 248: Financial Modeling with Excel

(1 Unit)
Introduction to Excel and the application of Excel to finance. Includes use of Excel to model various financial concepts and apply these concepts to real world situations. *Bedient, Hooks.*

## E&M 300: Econometrics

(1 Unit)
Prerequisite: One of the following: MATH 209, MATH 309, or E&M 200.
An introduction to empirical work in economics and management. Topics covered include: hypothesis testing, estimation, correlation, and regression and related problems. Students use statistical software to access data sources and to write an empirical paper. Topics covered include: hypothesis Not offered every year. *Jaqua.*

## E&M 309: Mathematical Economics

(1 Unit)
Prerequisites: E&M 201and at least one course in calculus.
Optimization and economic analysis, game theory and financial economics. Not offered every year. *Jaqua.*

## E&M 311: Intermediate Accounting I

(1 Unit)
Prerequisite: E&M 211.
Theory and practice underlying financial accounting measurement and reporting. Provides a detailed exploration of assets and their relationship to income determination. Includes coverage of generally accepted United States accounting principles (GAAP) and international financial reporting standards (IFRS). *Bedient, Carlson.*

## E&M 344: Portfolio Theory

(1 Unit)
Prerequisite: E&M 102.
An overview of the characteristics and analysis of individual security returns, and the theory and practice of optimally combining securities into portfolios. Examines the equilibrium pricing of securities in the context of the capital asset pricing model, and the risk/return relationship of both individual securities and portfolios, as well as the recent attack on the CAPM and the implications for efficient markets. Not offered every year. *Hooks.*

## E&M 345: Money and Banking

(1 Unit)
Prerequisite: E&M 102.
Focuses on the Federal Reserve and its attempts to promote maximum sustainable economic growth. Other topics include the nature of money, the determination of interest rates, the financial system and financial institution operations, the structure of the Federal Reserve and the macroeconomics of inflation and growth. *Hooks, Li.*

## E&M 365: International Finance

(1 Unit)
Prerequisite: E&M 102.
International macroeconomics. Particular attention is paid to the relationship among exchange rates, balance of payments, international capital flows and macroeconomic equilibrium. Eurocurrency markets and alternative international monetary systems are also examined. Particular attention is paid to the relationship among exchange rates, balance of payments, international capital flows and macroeconomic equilibrium. *Li.*
and (with approval of the E&M department chair)

## E&M 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## Two Units of Cognates:

### MATH 120: College Algebra

(1 Unit)
Prerequisites: 2.0 or higher in MATH 100 or equivalent, or appropriate score on the mathematics placement assessment.
A modern, unified approach to algebra and analytical geometry based on the concept of a function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Together with MATH 127 , serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of algebra, trigonometry and logarithms should elect MATH 141 in place of MATH 120. A graphing calculator is required. Not open to students who have completed MATH 125 . A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff*

Or higher

Or proven proficiency

### E&M 200: Economic Statistics

(1 Unit)
Prerequisite: Math 120 or demonstrated proficiency, MATH 125, or MATH 141.
A first course in statistics with emphasis on regression analysis and its applications in economics and management. Not open to students who have taken MATH 209 or MATH 309. *Jaqua.*

**OR**

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

**OR**

### MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

# Finance, B.A.

# Requirements for Finance Major (9 Units)

## A Minimum of 9 Units in Economics and Management, Including:

### E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

### E&M 102: The Economy and Financial Markets

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the macroeconomy and macroeconomic models with special emphasis on the role of financial markets, interest rates, the Federal Reserve, monetary and fiscal policy, and money and capital markets. *Hooks, Li.*

### E&M 201: Intermediate Microeconomics

(1 Unit)
Prerequisites: E&M 101: and MATH 120 or demonstrated proficiency, MATH 125, or MATH 141.
Theoretical analysis of consumer choice theory and demand, production and cost, the firm and market organization, distribution and general equilibrium, game theory. *Jaqua.*

### E&M 202: Intermediate Macroeconomics

(1 Unit)
Prerequisites: E&M 101; E&M 102; and MATH 120 ro demonstrated proficiency, MATH 125, or MATH 141.
The development of macroeconomic theory and its application to government policy toward unemployment, inflation and growth. *Hooks, Li.*

### E&M 211: Financial Accounting

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the world of business and accounting. Emphasis on understanding the concepts of net income, cash flow and financial condition. Communication of economic results through financial statements and reports. Development of analytical skills used in evaluating business success. Not open to first-year students. *Bedient, Carlson.*

### E&M 311: Intermediate Accounting I

(1 Unit)
Prerequisite: E&M 211.
Theory and practice underlying financial accounting measurement and reporting. Provides a detailed exploration of assets and their relationship to income determination. Includes coverage of generally accepted United States accounting principles (GAAP) and international financial reporting standards (IFRS). *Bedient, Carlson.*

**OR**

### E&M 312: Intermediate Accounting II

(1 Unit)
Prerequisite: E&M 211.
Theory and practice underlying financial accounting measurement and reporting. Provides a detailed exploration of liabilities and stockholders' equity, and other selected topics including pensions, leases and the statement of cash flows. Includes coverage of generally accepted United States accounting principles (GAAP) and international financial reporting standards (IFRS). Usually taken after E&M 311. *Bedient, Carlson.*

### E&M 346: Financial Markets

(1 Unit)
Prerequisite: E&M 102.
An examination of the way in which the market transfers resources from those with a surplus to those with a deficit. Students study both the theory of efficient transfer and the financial institutions and instruments which facilitate this transfer. Topics include the analysis of equity markets, fixed income markets and derivative markets. *Hooks.*

### E&M 348: Financial Management

(1 Unit)
Prerequisite: E&M 101.
A survey course covering principles of corporate financial management. Topics include working capital management, agency theory, capital budgeting, capital structure, divided policy, financial analysis and selected topics. *Hooks.*

## Plus One Unit Selected From the Following:

### E&M 248: Financial Modeling with Excel

(1 Unit)
Introduction to Excel and the application of Excel to finance. Includes use of Excel to model various financial concepts and apply these concepts to real world situations. *Bedient, Hooks.*

### E&M 345: Money and Banking

(1 Unit)
Prerequisite: E&M 102.
Focuses on the Federal Reserve and its attempts to promote maximum sustainable economic growth. Other topics include the nature of money, the determination of interest rates, the financial system and financial institution operations, the structure of the Federal Reserve and the macroeconomics of inflation and growth. *Hooks, Li.*

### E&M 344: Portfolio Theory

(1 Unit)
Prerequisite: E&M 102.
An overview of the characteristics and analysis of individual security returns, and the theory and practice of optimally combining securities into portfolios. Examines the equilibrium pricing of securities in the context of the capital asset pricing model, and the risk/return relationship of both individual securities and portfolios, as well as the recent attack on the CAPM and the implications for efficient markets. Not offered every year. *Hooks.*

### E&M 365: International Finance

(1 Unit)
Prerequisite: E&M 102.
International macroeconomics. Particular attention is paid to the relationship among exchange rates, balance of payments, international capital flows and macroeconomic equilibrium. Eurocurrency markets and alternative international monetary systems are also examined. Particular attention is paid to the relationship among exchange rates, balance of payments, international capital flows and macroeconomic equilibrium. *Li.*

## All Courses for the Major Must Be Taken for a Numerical Grade.

## Two Units of Cognates, Including:

### MATH 120: College Algebra

(1 Unit)
Prerequisites: 2.0 or higher in MATH 100 or equivalent, or appropriate score on the mathematics placement assessment.
A modern, unified approach to algebra and analytical geometry based on the concept of a function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Together with MATH 127 , serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of algebra, trigonometry and logarithms should elect MATH 141 in place of MATH 120. A graphing calculator is required. Not open to students who have completed MATH 125 . A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff*

**OR**

### MATH 125: Precalculus

(1 Unit)
Prerequisite: 2.0 or higher in Math 100 or appropriate score on teh mathematics placement assessment.
A modern, unified approach to algebra, trigonometry, logarithms and analytical geometry based on the concept of a function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions, trigonometric and inverse trigonometric functions, and analytic geometry (the circle, the parabola, the ellipse and the hyperbola) are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of algebra, trigonometry and logarithms should elect MATH 141 in place of Mathematics 125. A graphing calculator is required. Not open to students who have completed Math 120. *Staff.*

**OR**

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in

these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

(or higher or demonstrated proficiency)

It is recommended that this math cognate be completed in students' first or second semester at Albion College.

**AND**

### E&M 200: Economic Statistics

(1 Unit)
Prerequisite: Math 120 or demonstrated proficiency, MATH 125, or MATH 141.
A first course in statistics with emphasis on regression analysis and its applications in economics and management. Not open to students who have taken MATH 209 or MATH 309. *Jaqua.*

**OR**

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

**OR**

### MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

# Management Minor

## Information on Minors

The minors in accounting, economics, finance, management, and marketing management are not open to students with a major in the Economics and Management Department.

Students may not choose more than one minor in the Economics and Management Department.

All courses for the minor must be taken for a numerical grade, except those offered only on a credit/no credit basis.

# Requirements for Minor in Management

## Five Units in Economics and Management, Including:

### E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

### E&M 211: Financial Accounting

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the world of business and accounting. Emphasis on understanding the concepts of net income, cash flow and financial condition. Communication of economic results through financial statements and reports. Development of analytical skills used in evaluating business success. Not open to first-year students. *Bedient, Carlson.*

and either

### E&M 259: Managing People and Organizations

(1 Unit)
Prerequisite: Sophomore standing.
An introduction to organizational behavior, including analysis at the level of the individual group or team, and organization. Topics addressed include employee attitudes and job satisfaction, managerial decision making and problem solving, managing teams, conflict and negotiation, leadership, and organizational culture and design. *Baker, staff.*

**OR**

### E&M 359: Management

(1 Unit)
Prerequisite: Junior or senior standing, or permission of instructor.
An introduction to current management theory and practice. Traditional managerial functions such as planning, organizing and controlling are studied and contrasted with newer cross-functional approaches. *Baker, Bedient.*

## Plus Two Additional Units From:

### E&M 212: Managerial and Cost Accounting

(1 Unit)
Prerequisite: E&M 211 or permission of instructor.
Development and use of accounting information for effective managerial control and decision-making within a complex organization. Topics include cost behavior, profit planning, cost accounting (including job order, process and activity-based), just-in-time inventory control, standard costs and budgetary control. *Bedient, Carlson.*

## E&M 259: Managing People and Organizations

(1 Unit)
Prerequisite: Sophomore standing.
An introduction to organizational behavior, including analysis at the level of the individual group or team, and organization. Topics addressed include employee attitudes and job satisfaction, managerial decision making and problem solving, managing teams, conflict and negotiation, leadership, and organizational culture and design. *Baker, staff.*

## E&M 351: Women in Business and Leadership

(1 Unit)
Prerequisite: Junior or senior standing.
Historical and contemporary perspectives on the expanding role of women in leadership positions, both in business and in other realms, such as politics. Extensive classroom discussions and use of case studies. Issues addressed include equal pay, work-family balance, the "opt-out myth," challenges women face in various industries or occupations, and the role of corporations in hindering or supporting women's advancement. *Baker.*

## E&M 311: Intermediate Accounting I

(1 Unit)
Prerequisite: E&M 211.
Theory and practice underlying financial accounting measurement and reporting. Provides a detailed exploration of assets and their relationship to income determination. Includes coverage of generally accepted United States accounting principles (GAAP) and international financial reporting standards (IFRS). *Bedient, Carlson.*

## E&M 312: Intermediate Accounting II

(1 Unit)
Prerequisite: E&M 211.
Theory and practice underlying financial accounting measurement and reporting. Provides a detailed exploration of liabilities and stockholders' equity, and other selected topics including pensions, leases and the statement of cash flows. Includes coverage of generally accepted United States accounting principles (GAAP) and international financial reporting standards (IFRS). Usually taken after E&M 311. *Bedient, Carlson.*

## E&M 313: Federal Income Taxation

(1 Unit)
Prerequisite: E&M 311.
Comprehensive introduction to federal income taxation, particularly as it relates to individuals and businesses. Emphasis on the recognition of opportunities for effective tax planning and management. *Carlson.*

## E&M 316: Auditing

(1 Unit)
Prerequisites: E&M 311 or E&M 312.
Introduction to auditing concepts, objectives and standards; topics include professional ethics, types of audits (their purpose, scope, and methodology). EDP auditing, and statistical sampling. Reference will be made to authoritative auditing standards and pronouncements. *Bedient, Carlson.*

## E&M 344: Portfolio Theory

(1 Unit)
Prerequisite: E&M 102.
An overview of the characteristics and analysis of individual security returns, and the theory and practice of optimally combining securities into portfolios. Examines the equilibrium pricing of securities in the context of the capital asset pricing model, and the risk/return relationship of both individual securities and portfolios, as well as the recent attack on the CAPM and the implications for efficient markets. Not offered every year. *Hooks.*

## E&M 348: Financial Management

(1 Unit)
Prerequisite: E&M 101.
A survey course covering principles of corporate financial management. Topics include working capital management, agency theory, capital budgeting, capital structure, divided policy, financial analysis and selected topics. *Hooks.*

## E&M 350: Business Law

(1 Unit)
Prerequisite: Junior or senior standing.
A case approach to the application of legal principles to business activity. Particular emphasis is placed upon the law of contracts, the Uniform Commercial Code, business organization, and federal regulation of the competitive process. Junior or senior standing is recommended. *Staff.*

## E&M 353: Labor Law, Unions and Management

(1 Unit)
Prerequisite: Sophomore standing or permission of instructor.
Labor history, labor law, union-management relations, comparative labor movements. Student participation in a collective bargaining game. Not offered every year. *Saltzman.*

## E&M 355: Human Resource Management

(1 Unit)
Prerequisite: Junior or senior standing.
An overview of personnel management, with an emphasis on the needs of the general manager rather than the personnel specialist. Topics include employee motivation, job enrichment, labor relations, grievances and discipline, recruitment and selection, equal employment opportunity, performance appraisal, compensation and employee benefits. *Baker, Saltzman.*

## E&M 357: Business Functions

(1 Unit)
Prerequisite: Permission of instructor.
Selected topics in management, finance and marketing for students in the Management for the Professions Concentration. The course highlights fundamental concepts with particular attention to their interactions within the context of the management of an organization. *Bedient.*

## E&M 358: Management Consulting

(1 Unit)
Prerequisite: Junior or senior standing.
Prior courses related to management are recommended but not required. The role of management consultants in diagnosing organizational problems and developing action plans that can be effectively implemented. Students work on a team-based management consulting project for a community organization to gain "real world" experience and to develop interpersonal, communication and analytical skills. Teams address issues such as strategy, organizational structure, leadership development or process efficiency. Not offered every year. *Baker.*

### E&M 359: Management

(1 Unit)
Prerequisite: Junior or senior standing, or permission of instructor.
An introduction to current management theory and practice. Traditional managerial functions such as planning, organizing and controlling are studied and contrasted with newer cross-functional approaches. *Baker, Bedient.*

### E&M 362: International Management

(1 Unit)
Prerequisite: Junior or senior standing.
Cross-cultural, ethical and social issues related to doing business abroad. Corporate strategy and structure, communication, negotiation, human resources and marketing in multinational operations. Not offered every year. *Baker.*

### E&M 346: Financial Markets

(1 Unit)
Prerequisite: E&M 102.
An examination of the way in which the market transfers resources from those with a surplus to those with a deficit. Students study both the theory of efficient transfer and the financial institutions and instruments which facilitate this transfer. Topics include the analysis of equity markets, fixed income markets and derivative markets. *Hooks.*

### E&M 352: Negotiation and Dispute Resolution

(1 Unit)
Prerequisite: Junior or senior standing, or permission of instructor.
An introductory study of the theories and concepts related to negotiation and dispute resolution developed in such fields as microeconomics, psychology and industrial relations. Includes many role-playing exercises to provide students with practice in negotiation. *Saltzman.*

and (with approval of the department chair)

### E&M 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

# Marketing Management B.A.

## Requirements for Marketing Management Major (8 Units)

The eight units used to fulfill major requirements must be taken for a numerical grade.

### E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

### E&M 102: The Economy and Financial Markets

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the macroeconomy and macroeconomic models with special emphasis on the role of financial markets, interest rates, the Federal Reserve, monetary and fiscal policy, and money and capital markets. *Hooks, Li.*

### E&M 220: Marketing Principles

(1 Unit)
Prerequisite: E&M 101 . PSYC 101 recommended.
An introduction to the role that product, price, promotion, and distribution play in marketing strategy and implementation. Addresses buyer behavior, market segmentation, and competititve positioning. Provides background needed for all 300-level marketing courses. *Yayla*

### E&M 320: Consumer Behavior

(1 Unit)
E&M 220 and one of the following: COMM 101, PSYC 101
Applies psychology and economics to analyze how marketers create value for customers, what motivates shoppers to buy, and how consumers process information and make decisions. Also addresses persuasion techniques, cross-cultural influences on consumer behavior, and the impact of corporate reputation on consumer choice. *Yayla*

### E&M 321: Marketing Research

(1 Unit)
Prerequisites: E&M 220 ; E&M 200 OR MATH 209 OR BOTH PSYC 204 & PSYC 306
Use of marketing data to inform managerial decision-making. Topics include defining research objectives, data sources for marketing, exploratory research methods, survey research design, observational research techniques, experimental design, sampling procedures, data collection and analysis, and communicating research findings. Hands-on computer work is an important part of the course. *Yayla*

### E&M 329: Marketing Strategy

(1 Unit)
Prerequisite: E&M 220. Additional prior courses in marketing are recommended.

Focuses on marketing's role in gaining a sustainable competitive advantage. Emphasis is on the application of key concepts learned in other courses to analyze case studies and participate in a marketing simulation game. Requires students to write case reports, work in groups, and make a project presentation. *Yayla*

## One of the Following Courses:

### E&M 324: International Marketing

(1 Unit)
Prerequisite: E&M 220
Marketing across national borders, marketing within foreign countries, and the coordination of global marketing. Emphasis on the management response to conditions that differ from those in domestic marketing, e.g., foreign cultures, nationalism, government policies, business institutions, and level of economic development. Not offered every year. *Yayla*

### E&M 325: Data-Driven Digital Marketing

(1 Unit)
E&M 220; E&M 200 OR MATH 209 OR MATH 309 OR BOTH PSYC 204 & 206
Overview of the rapidly changing field of digital marketing. Use of "big data" and machine learning to improve the effectiveness of digital marketing campaigns. Not offered every year. *Yayla*

## One Additional Unit from E&M at the 200 Level or Above

## The Following Four Cognates Must be Completed:

### MATH 120: College Algebra

(1 Unit)
Prerequisites: 2.0 or higher in MATH 100 or equivalent, or appropriate score on the mathematics placement assessment.
A modern, unified approach to algebra and analytical geometry based on the concept of a function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Together with MATH 127 , serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of algebra, trigonometry and logarithms should elect MATH 141 in place of MATH 120. A graphing calculator is required. Not open to students who have completed MATH 125 . A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff*

OR

### MATH 125: Precalculus

(1 Unit)
Prerequisite: 2.0 or higher in Math 100 or appropriate score on teh mathematics placement assessment.
A modern, unified approach to algebra, trigonometry, logarithms and analytical geometry based on the concept of a function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions, trigonometric and inverse trigonometric functions, and analytic geometry (the circle, the parabola, the ellipse and the hyperbola) are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of algebra, trigonometry and logarithms should elect MATH 141 in place of Mathematics 125. A graphing calculator is required. Not open to students who have completed Math 120. *Staff.*

OR

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

It is recommended that this math cognate be completed in students' first or second semester at Albion College.

## One of the Following Courses:

### COMM 101: Introduction to Human Communication

(1 Unit)
An introduction to the study of communication. Students investigate communication theory, models, symbols and signs, verbal and nonverbal communication, interpersonal communication, group communication, organizational communication, mass communication, communication ethics and new communication technologies. *Staff.*

### PSYC 101: Introduction to Psychology

(1 Unit)
An introduction to psychology's major areas of study, theoretical approaches, empirical findings, and research methodologies. Provides students with a broad overview of the field of psychology and examines the nature of psychology as a discipline. Addresses Psychology's major sub-disciplines, which range from the borders of biology to the borders of computer science to the borders of sociology. Introduction to Psychology is a prerequisite for all other psychology courses. *Staff.*

## One of the Following Statistics Options:

### E&M 200: Economic Statistics

(1 Unit)
Prerequisite: Math 120 or demonstrated proficiency, MATH 125, or MATH 141.
A first course in statistics with emphasis on regression analysis and its applications in economics and management. Not open to students who have taken MATH 209 or MATH 309. *Jaqua.*

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and

analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

### MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

### PSYC 204: Research Methods and Statistics I

(1 Unit)
Prerequisites: PSYC 101 with a grade of 2.0 or higher and a 200-level lecture-based course, or permission of instructor.
An introduction to the theory and practice of research methods in psychology with an emphasis on descriptive designs. Focuses on naturalistic, archival, and survey methodology with discussion of descriptive statistics, probability, Chi-square, z-scores, correlation, and multiple regression. Lecture and laboratory. Course normally taken during second year. *Christopher, Elischberger, Francis, Hill, Jechura, Wieth, Staff.*

### PSYC 306: Research Methods and Statistics II

(1 Unit)
Prerequisite: PSYC 204 with a grade of 2.0 or higher, or permission of instructor.
Further exploration of the theory and practice of research methods in psychology with an emphasis on experimental designs. Focuses on both simple and complex designs with discussion of z-test, t-test, ANOVA (one-way, repeated measures and factorial), and MANOVA. Lecture and laboratory. Course normally taken during second year. *Christopher, Elischberger, Hill, Jechura, Wieth, Staff.*

## One of the Following Courses:

### COMM 205: Mass Communication

(1 Unit)
An introduction to the different modes of mass communication--from the printing press to the Internet--from historical and cultural perspectives in order to understand the impact of mass communication on society. Topics include mass communication's production and reproduction of cultural mores and values, and the controversy surrounding media "effects." *Staff.*

### COMM 215: Social Media

(1 Unit)
An Examination of social media and the role in communication today. Students investigate social media elements, media and interpersonal communication theories, communication stratigies, and socio-cultural implications of social media. Topics include social media production and reproduction of cultural mores and values, consumption patterns of social media content, and implication of McLuhan's "the medium is the message" perspective.

### COMM 306: Public Relations

(1 Unit)
A theoretical and practical examination of the public relations field, including internal and external communications as well as media relations. Students occasionally gain practical experience by participating in a major campaign. *Staff.*

### COMM 351: Persuasion

(1 Unit)
A theoretical analysis of the process of influencing belief, attitude or behavior through appeals to reason, emotion and ethos. Students investigate experimental and rhetorical theories in the field and the ethical considerations of persuasion. *Staff.*

### PSYC 236: Social Psychology

(1 Unit)
Prerequisite: PSYC 101.
The scientific study of the ways people think, feel and behave in social situations. Topics include self-perception and self-presentation, person perception, stereo-typing and prejudice, interpersonal attraction and close relationships, altruism, aggression, attitudes and persuasion, conformity, and group processes. Also examines theory and research in several applied areas of social psychology, including law and health. *Hill, Staff.*

### SOC 356: Social Psychology: Sociological Perspectives

(1 Unit)
Prerequisite: SOC 101 and junior standing or permission of instructor.
The study of the relationship between personal experiences and society. Explores how our sense of self, identity, subjective experience, feelings, beliefs, and relationships to and interactions with others are shaped by and influence social life. Focuses on theoretical traditions and trends within micro-sociology and their applications and usefulness for empirical research. Special attention will be paid to connecting the micro-workings of social life to larger institutional, cultural and political processes and issues. *Melzer.*

# Marketing Management Minor

## Information on Minors

The minors in accounting, economics, finance, management, and marketing management are not open to students with a major in the Economics and Management Department.

Students may not choose more than one minor in the Economics and Management Department.

All courses for the minor must be taken for a numerical grade, except those offered only on a credit/no credit basis.

## Requirements for Minor in Marketing Management

### E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

### E&M 220: Marketing Principles

(1 Unit)
Prerequisite: E&M 101 .  PSYC 101 recommended.
An introduction to the role that product, price, promotion, and distribution play in marketing strategy and implementation.  Addresses buyer behavior, market segmentation, and competititve positioning.  Provides background needed for all 300-level marketing courses. *Yayla*

## Plus three units selected from the following, at least two of which must be from E&M:

### E&M 320: Consumer Behavior

(1 Unit)
E&M 220 and one of the following:  COMM 101, PSYC 101
Applies psychology and economics to analyze how marketers create value for customers, what motivates shoppers to buy, and how consumers process information and make decisions. Also addresses persuasion techniques, cross-cultural influences on consumer behavior, and the impact of corporate reputation on consumer choice. *Yayla*

### E&M 321: Marketing Research

(1 Unit)
Prerequisites: E&M 220 ; E&M 200  OR MATH 209  OR BOTH PSYC 204  & PSYC 306
Use of marketing data to inform managerial decision-making.  Topics include defining research objectives, data sources for marketing, exploratory research methods, survey research design, observational research techniques, experimental design, sampling procedures, data collection and analysis, and communicating research findings.  Hands-on computer work is an important part of the course. *Yayla*

### E&M 324: International Marketing

(1 Unit)
Prerequisite:  E&M 220
Marketing across national borders, marketing within foreign countries, and the coordination of global marketing. Emphasis on the management response to conditions that differ from those in domestic marketing, e.g., foreign cultures, nationalism, government policies, business institutions, and level of economic development. Not offered every year. *Yayla*

### E&M 325: Data-Driven Digital Marketing

(1 Unit)
E&M 220; E&M 200 OR MATH 209 OR MATH 309 OR BOTH PSYC 204 & 206
Overview of the rapidly changing field of digital marketing. Use of "big data" and machine learning to improve the effectiveness of digital marketing campaigns. Not offered every year. *Yayla*

### E&M 329: Marketing Strategy

(1 Unit)
Prerequisite: E&M 220.  Additional prior courses in marketing are recommended.

Focuses on marketing's role in gaining a sustainable competitive advantage. Emphasis is on the application of key

concepts learned in other courses to analyze case studies and participate in a marketing simulation game. Requires students to write case reports, work in groups, and make a project presentation. *Yayla*

## COMM 205: Mass Communication

(1 Unit)
An introduction to the different modes of mass communication--from the printing press to the Internet--from historical and cultural perspectives in order to understand the impact of mass communication on society. Topics include mass communication's production and reproduction of cultural mores and values, and the controversy surrounding media "effects." *Staff.*

## COMM 215: Social Media

(1 Unit)
An Examination of social media and the role in communication today. Students investigate social media elements, media and interpersonal communication theories, communication stratigies, and socio-cultural implications of social media. Topics include social media production and reproduction of cultural mores and values, consumption patterns of social media content, and implication of McLuhan's "the medium is the message" perspective.

## COMM 306: Public Relations

(1 Unit)
A theoretical and practical examination of the public relations field, including internal and external communications as well as media relations. Students occasionally gain practical experience by participating in a major campaign. *Staff.*

## COMM 351: Persuasion

(1 Unit)
A theoretical analysis of the process of influencing belief, attitude or behavior through appeals to reason, emotion and ethos. Students investigate experimental and rhetorical theories in the field and the ethical considerations of persuasion. *Staff.*

## PSYC 236: Social Psychology

(1 Unit)
Prerequisite: PSYC 101.
The scientific study of the ways people think, feel and behave in social situations. Topics include self-perception and self-presentation, person perception, stereo-typing and prejudice, interpersonal attraction and close relationships, altruism, aggression, attitudes and persuasion, conformity, and group processes. Also examines theory and research in several applied areas of social psychology, including law and health. *Hill, Staff.*

## SOC 356: Social Psychology: Sociological Perspectives

(1 Unit)
Prerequisite: SOC 101 and junior standing or permission of instructor.
The study of the relationship between personal experiences and society. Explores how our sense of self, identity, subjective experience, feelings, beliefs, and relationships to and interactions with others are shaped by and influence social life. Focuses on theoretical traditions and trends within micro-sociology and their applications and usefulness for empirical research. Special attention will be paid to connecting the micro-workings of social life to larger institutional, cultural and political processes and issues. *Melzer.*

Plus one cognate selected from the following:

### E&M 200: Economic Statistics

(1 Unit)
Prerequisite: Math 120 or demonstrated proficiency, MATH 125, or MATH 141.
A first course in statistics with emphasis on regression analysis and its applications in economics and management. Not open to students who have taken MATH 209 or MATH 309. *Jaqua.*

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

### MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

### PSYC 101: Introduction to Psychology

(1 Unit)
An introduction to psychology's major areas of study, theoretical approaches, empirical findings, and research methodologies. Provides students with a broad overview of the field of psychology and examines the nature of psychology as a discipline. Addresses Psychology's major sub-disciplines, which range from the borders of biology to the borders of computer science to the borders of sociology. Introduction to Psychology is a prerequisite for all other psychology courses. *Staff.*

# Education

# Faculty

**Suellyn M. Henke**, chair and professor.
B.P., M.A.T., Ph.D., Miami University (Ohio).

**Kyle D. Shanton**, professor.
B.A., University of Iowa; M.A., Ph.D., University of Arizona.

**Betty Okwako Riekkola**, assistant professor
B.Ed., Kenyatta University (Nairobi, Kenya); M.D.A., Western Michigan University; Ph.D. Michigan State University.

# Introduction

The Education Department is the academic unit housing the faculty and courses that support the mission of the Fritz Shurmur Center for Teacher Development and the teacher education program (TEP). Our mission is to prepare educators who understand the purpose(s) of education in a culturally pluralistic society and are able to foster and nourish a sense of belonging for all PK-12 learners. We provide extensive opportunities to teach and interact with children, youth and families from diverse community contexts. Information about the program of study (concentrations that lead to eligibility for teacher certification in elementary, secondary, PK-12) as well as minors in Educational Studies and Teaching English as a Second Language may be found in this section. All students with an interest in the field of education are encouraged to contact the Education Department as soon as possible for individualized advising.

The Shurmur Center for Teacher Development supports partnerships with diverse schools and educational settings, capstone events such as the teacher education program Capstone Symposium on Teaching and provides collaborative professional development opportunities for prospective teachers and practitioners.

The Ferguson Center for Technology-Aided Teaching and Learning hosts the Learning Café, a dynamic and flexible place for prospective teachers to use computer and Web-based technologies for designing lesson and unit plans, viewing and archiving videotaped examples of teaching and learning, and creating electronic and online portfolios of TEP achievements. There is a lending library of equipment (e.g., digital cameras, video cameras, digital audio recorders, individual response systems) and curriculum materials to support students in their field experiences. The Ferguson Center is a member of the Michigan Association of Computer Users in Learning (MACUL), the International Society for Technology in Education (ISTE) and the Consortium for Outstanding Achievement in Teaching with Technology (COATT). Albion College education students are eligible to apply for the COATT award, given to a pre-service and in-service teacher who creates a portfolio of his or her work in educational technology and teaching and learning.

Albion College's teacher education program offerings that lead to eligibility for teacher certification in elementary, secondary, and PK-12 education are authorized by the Michigan Department of Education's Office of Educator Excellence. Albion's teacher education program offerings are accredited by the Council for the Accreditation of Educator Preparation (CAEP). Albion College is an anti-racist institution. The Teacher Education Program actively promotes diversity, belonging and equity through critical and compassionate communication and strategic outreach efforts to various students, faculty and staff (e.g., historically under-represented, first-generation, undocumented and DACA students, LGBTQ students).

Changes in certification requirements as determined by the Michigan Department of Education and/or in requirements set by Albion College and the Education Department may necessitate changes in programs described in this catalog. When such changes are implemented, efforts will be made to provide as smooth a transition to the new requirements as possible.

In preparation for student teaching, students participate in clinical experiences integrated into course work in 100, 200- and 300-level education classes. Every clinical experience placement is arranged by the Clinical Experience Coordinator in consultation with the Education Department. All TEP students are required to complete either EDUC 396: Boundary Crossings in Elementary Schools or EDUC 397: Boundary Crossings in Secondary Schools (also known as "Maemester"). These courses require an integrated field experience that begins during the spring semester and includes full-time participation during three weeks in a classroom in May as part of the junior or senior year. There is no additional tuition charged for the Maemester portion of the course; however, students will be charged for room and board during this period. Students are expected to complete a digital portfolio prior to completing their program of study.

Albion's teacher education program offerings are accredited by the Teacher Education Accreditation Council. We welcome students of all races, religions or national origins and are in full compliance with the Civil Rights Act of 1964.

**Admission**—Students may formally apply for admission to the Shurmur Center for Teacher Development / teacher education program (TEP) after successfully completing EDUC 110 and EDUC 195. Requirements include: a 2.5

cumulative grade point average (GPA), and teaching major GPA and teaching minor (required for secondary certification) GPA, a 3.0 GPA in the education concentration, completion of an application (distributed in EDUC 196), interview, two letters of recommendation. In accordance with State Board of Education policy, students are also required to complete two criminal history checks: in EDUC 195 prior to admission, and again prior to student teaching. As part of this process, students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee. Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. A detailed explanation of requirements for admission may be obtained directly from the Education Department.

Further, students are required to maintain a 2.5 cumulative GPA and in their teaching major, teaching minor, and 3.0 GPA in education concentration and in other coursework required for the teacher education program. All required courses must be taken for a grade, except those offered only on a credit/no credit basis.

**Student Teaching—**The application for student teaching is distributed by the Clinical Experience Coordinator. Prospective teachers submit an application no later than November of the preceding academic year. The Clinical Experience Coordinator will consult with the Certification Officer and communicate with building administrators, mentor teachers, and prospective teachers to finalize student teaching internships. All coursework and requirements for graduation must be completed prior to the student teaching internship in order to be eligible. Student teaching is a full-semester capstone internship (3 units; EDUC 421/2/3) and seminar (1 unit; EDUC 431;2) that brings many significant responsibilities and obligations, and involves time commitments during and after school as well as evenings. Student teachers are expected to be present for all internship commitments; this includes the weekly seminar and all Capstone activities and events. Student teaching is a high-stakes internship mentored by a tenured public school teacher, with certification in the relevant grade band and subject areas, who assesses comprehensive demonstration of professional standards and Core Teaching Practices required for eligibility for certification. The building principal and mentor teacher always have the right to terminate a student teaching placement. Therefore, prospective teachers must communicate, in writing, to the Education Department for consideration of requests to take other courses, work, hold leadership positions in organizations on- or off-campus, or participate in any activity that would potentially conflict with the responsibilities, schedule, and prioritization of focus for the internship and jeopardize eligibility for certification. Such requests should be carefully thought through in consultation with an advisor in education. All placements are made within a 30-mile radius of Albion in order to accommodate supervision, seminar and capstone commitments.

All education students need to pass Michigan Test for Teacher Certification (MTTC) grade band level and subject area tests to be eligible for certification by the Michigan Department of Education (MDE). It is recommended that students take content area exams once major course work for the relevant area and the colloquium on preparing for this testing is completed. At the time of registration, individuals must request that their MTTC scores be officially reported to Albion College (Institution Code 02). Certification tests are determined by the Michigan Department of Education and are periodically reviewed and changed. Consulting with the Certification Officer in advance of registration in order to confirm appropriate test registration is strongly recommended. Individuals must pass the respective tests for the desired grade band and subject area(s) they wish to teach. Prospective teachers who complete the elementary education concentration must pass the PK-3 and 3-6 grade band tests; those who complete the secondary education concentration must pass the 5-9 and 7-12 grade band tests as well as the subject area test relevant to their major and minor. K-12 music education students take only the Music Education Test. Those seeking certification to teach French, German or Spanish are required to pass the relevant world language subject area test and the American Council on the Teaching of Foreign Languages' Oral Proficiency Interview (OPI) exam with an "advanced low" level of proficiency (or higher) result. Close consultation with the Modern Languages and Cultures Department and TEP adviser to prepare for this exam is strongly recommended.

**Certification Fee**—Michigan Act No. 339 requires that all teacher candidates pay a fee of $160 for the issuance of a certificate. Albion College is not involved in the collection of the fee. Candidates are billed online by the MDE. Albion College can only verify a candidate's application as eligible for certification. The MDE does not authorize an application until the candidate pays the certification fee.

**Standard Certification**—Initial certification issued by the State of Michigan is a standard certificate which is valid for up to five years. Program completers apply for certification via the Michigan Online Educator Certification System (MOECS). The standard certificate is available to print online at MOECS; notarization required.

Education Department Website

# Student Learning Outcomes

TEP

Students will be able to:

1. Create instructional plans
2. Teach lessons in public school settings
3. Assess K-12 student learning
4. Identify key components for improving instructional plans for student learning in student teaching
5. Complete requirements for eligibility for certification

TESL

Students will be able to:

1. Analyze models of instruction for teaching English as a second language
2. Identify stages for acquiring and learning English as a second language
3. Participate in educational settings serving English Learners
4. Teach lessons for English Learners
5. Assess English acquisition and learning

Educational Studies

Students will be able to:

1. Describe diverse cultural perspectives in learning situations
2. Identify key features of professionalism
3. Identify processes for learning in educational settings
4. Build rapport with learners in two or more educational settings

# Educational Studies Minor

## Requirements for Minor in Educational Studies

This interdisciplinary minor is designed for students who have a broadly defined interest in the field of education (e.g., youth development and learning; sociocultural theory applied to schooling, families and youth; youth subcultures; comparative education; fine and dramatic arts pedagogies; public education policy; environmental education; pediatric health; recreation and athletics; museum or community-based education). The minor in educational studies can benefit students who are interested in making unique connections to their major area of study as well as students who are interested in exploring careers in education. Many graduate programs and career paths such as museum studies, public policy, counseling and sociology recognize the value of academic preparation in the field of education.

Students who participate in the educational studies minor are not required to be admitted into the Shurmur Center for Teacher Development/Teacher Education Program. The minor in educational studies is a generalized study of the field of education and does not lead to teacher certification. Students who complete teacher certification at Albion College are not eligible for the minor in educational studies. Students who are interested in declaring an Educational Studies minor must schedule an appointment with the chair of the Education Department to discuss their plan of study and options.

- A minimum of five units of course work including one unit in foundations of education (EDUC 195 ), one unit in human development and learning theories (PSYC 251, PSYC 253, or Educational Psychology), completion of an internship or practicum (EDUC 196 , EDUC 382 or EDUC 398) and a minimum of two or two and one-half units of electives constituting a curricular focus.
- Please note: EDUC 195 and EDUC 196 are accompanied by a field experience in the public schools and requires completion of (1) Albion College criminal history check form, (2) Internet Criminal History Access Tool search, and (3) Albion College educational/judicial records check.
- Students must receive prior written consent from the Education Department to apply a directed study or course toward completion of the educational studies minor. Requests should be sent directly to the chair of the Education Department.

# Elementary Education Concentration (PK-3 only)

The new Elementary Education Concentration is in compliance with the Michigan Department of Education's newly revised teacher certification structure and standards for preparation for PK-3 and 3-6 grade bands (approved by the State Board of Education in November 2019).

Students interested in pursuing a concentration for elementary education (PK-3; PK-3/3-6) are also required to complete a major with an education concentration. Students are encouraged to consult with the Education Department for guidance before beginning a program of study.

## Required Courses for PK-3:

### EDUC 110: Exploring Teaching Colloquium

.25 unit
Exploration of educational careers and options for teacher certification. Students will document a minimum of ten hours of clinical experience observing in varied educational settings and grade levels. *Staff*

### EDUC 195: Education Foundations: Access, Equity and Advocacy

1 Unit
Introductory course for students interested in exploring the field of education, TESL, and PK-12 education with teacher certification. An overview of the historical, social, political, multicultural, and philosophical foundations of education. Provides the larger conceptual perspectives necessary for studying teaching, learning and education and critically examines the power relationships among teachers, schools and society. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers PK-12, the Michigan Core Teaching Practice with explicit emphasis on building relationships and creating equitable learning environments for ethnolinguistically diverse students. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee. Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. *Staff*

## EDUC 196: Learner-Centered Approaches, Supports and Technologies

1 Unit
Prerequisites: EDUC 195 and a minimum cumulative GPA of 2.5.
Introductory course for students interested in PK-12 education with teacher certification. Emphasizes understanding and application of learner-centered approaches, supports and technologies as well as social-emotional learning. These are essential in understanding and supporting personal and professional growth, as well as in understanding diverse PK-12 learners and the development of the whole child. These will be explored in greater depth in all subsequent education courses. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for the Preparation of Teachers PK-12, Early Childhood Quality Standards, the Michigan Core Teaching Practices and special education. *Staff*

## EDUC 248: Social Studies Pedagogy in Elementary Schools: Inquiry and Civic Engagement in a Diverse World

(.5 Unit)
Prerequisites: EDUC 195 , EDUC 196 and permission of the Education Department.
Supports elementary education students in developing pedagogical knowledge and skills through the exploration of professional and theoretical literature, projects and field-based teaching experiences. Required professional sequence course for all elementary education prospective teachers. Students will develop strategies for connecting the interrelated content in disciplines to the development of children as citizens of the world. A minimum of ten hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for the Preparation of Teachers PK-3, the Michigan Core Teaching Practices. *Staff.*

## EDUC 268: Science Pedagogy in Elementary Schools: Inquiry and Sustainability in a Diverse World

(.5 Unit)
Prerequisites: EDUC 195 , EDUC 196 and permission of Education Department.
Inquiry-oriented, project-based coursework of pedagogical content for education students in STEM fields to develop knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences working with 21st century skills and technology. Requires planning and preparation, engagement in classroom environments, instruction in classroom environments, and formative and summative reflection. A minimum of ten hours of clinical experience focuses on development in each of the domains of the Frameworks for Teaching, the Standards for the Preparation of Teachers PK-3, the Michigan Core Teaching Practices.

## EDUC 271: Literacy Pedagogy in Elementary Schools: Contexts, Motivation and Engagement

1 unit
Prerequisites: EDUC 195 , EDUC 196 and permission of department.
Examines relevant research base and theory on early literacy acquisition and learning contexts, motivation, engagement and assessments. Looks at culturally responsive pedagogy with children from a variety of cultural, economic, ethno-linguistic and racial backgrounds. Emphasizes the knowledge, practices, and strategies needed to address all of the constructs of literacy developing in an integrated manner and in the service of meaningful listening, speaking, reading, writing, viewing and visually representing. Requires planning and preparation, engagement in classroom environments, instruction in classroom environments, and formative and summative reflection. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers of Lower Elementary (PK-3) Education, Early Childhood Quality Standards, and the Michigan Core Teaching Practices. *Shanton, Staff.*

## EDUC 300: Eligibility for Teacher Certification

.25 unit
Prerequisites: EDUC 195, 196 and permission of department.
Eligibility for teacher certification requires completion of many steps, including successful passage of Michigan Tests for Teacher Certification (American Council on the Teaching of Languages Oral Proficiency Interview also required for world language teachers). This course will provide students with the skills to take initiative in planning and accessing resources. Students may choose to take this course more than one time. *Staff*

## EDUC 354: Mathematics Pedagogy in Elementary Schools: Context, Motivation and Engagement

(1 Unit)
Prerequisites: EDUC 195 , EDUC 196 and permission of department.
Examines relevant research base and theory on early mathematics learning, assessments and pedagogical approaches. Looks at culturally responsive pedagogy with children from a variety of cultural, economic, ethno-linguistic and racial backgrounds. Emphasizes mathematics-specific teaching in terms of the high-leverage knowledge, practices, and strategies needed to address all of the constructs of mathematics developing in an integrated manner and in the service of meaningful learning and success. Requires planning and preparation, engagement in classroom environments, instruction in classroom environments, and formative and summative reflection. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers of Lower Elementary (PK-3) Education, Early Childhood Quality Standards, and the Michigan Core Teaching Practices. *Staff*

## EDUC 370: Literacy Essentials for Elementary Curriculum Design and Assessment

(.5 Unit)
Prerequisites: EDUC 195 , EDUC 196 and permission of the Education Department.
Examines relevant research base and theory on early literacy acquisition and learning processes, assessments, and pedagogical approaches. Looks at culturally responsive pedagogy with children from a variety of cultural, economic, ethno-linguistic and racial backgrounds. Emphasizes the motivations, knowledge, practices, and strategies involved in teaching and learning. Requires planning and preparation, engagement in classroom environments, instruction in classroom environments, and formative and summative reflection. Ten hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers of Lower Elementary (PK-#) Education, Early Childhood Quality Standards, and the Michigan Core Teaching Practices. This course is required for all K-12 French, German, and Spanish majors. *Staff*

## EDUC 396: Boundary Crossings in Elementary Schools

(1 Unit)
Prerequisites: EDUC 202, EDUC 203.
Focuses on learning about and working in the Albion Public Schools with children/youth from different backgrounds. Combines curriculum and classroom management theory and practice, and emphasizes exploring and developing integrative and creative teaching skills before doing the student teaching semester. Note: This Maymester course/experience begins during the spring semester and extends for three and one-half weeks after the spring semester for all junior elementary teacher education students. *Shanton, Staff.*

## EDUC 421: Student Teaching, Grades PK-3 and/or 3-6

(3 Units)
Prerequisites: All elementary education concentration courses need to be completed. Advising and permission from department.
Internship is completed in relevant subject areas at grades PK-3 and/or 3-6, under the supervision of a recommended and tenured teacher. Clinical experiences begin the first day of the semester, and ends on the penultimate week of classes. Support for and engagement in a student teaching internship are integral to the course. On-site guidance and supervision by a clinical experience supervisor occurs a minimum of five times across the semester.Instructor of record for the student teaching seminar also provides regular support for student teachers enrolled in the internship. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee (but can be reimbursed by the Shurmur Center). Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. Offered on a credit/no credit basis. Offered on a credit/no credit basis. *Staff.*

## EDUC 431: Seminar: Elementary Student Teaching

(1 Unit)
Prerequisite: Permission of department.
A capstone course reflecting on practice in the classroom. Focuses on professional development, portfolio design, technology integration and classroom management. Taken concurrently during student teaching semester. *Shanton.*

## ENGL 101W: College Writing

1 unit
An introduction to the idea and practice of college writing. Emphasizes writing as process, with close attention to generation of ideas, clarity of expression at the sentence level, organization and logic of argumentation, conventions of academic discourse, and strategies for revision. *Staff*

## IDY 262: Arts Integrated Learning

(1 Unit)
Prerequisites: EDUC 195.
Introduces teacher certification candidates to basic elements of arts composition (space, time, energy), performance and artistic analysis as they relate to music, visual art, dance and theatre as well as the work of prominent artists within these disciplines. Creative assignments and lesson plans explored within the course are enacted in diverse learning environments. Culminating projects include the creation and presentation of original works of art, as well as reflection on personal and peer learning. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for the Preparation of Teachers PK-12, Early Childhood Quality Standards, and the Michigan Core Teaching Practices. *Staff.*

## MATH 104: Mathematics for Elementary Teachers

(1 Unit)
Prerequisite: MATH 100 or placement evaluation at the MATH 120 level or higher.
Priority given to students in the elementary education program. An investigation of mathematics (arithmetic, geometry, algebra, problem solving) for elementary school teachers. Topics are selected from: sets, relations and functions; numeration systems; whole numbers and their operations; number theory; rational numbers and fractions; decimals and real numbers; geometry and measurement; and probability and statistics. Emphasizes doing mathematics, using manipulatives, and developing intuition and problem-solving skills. Laboratory. *Bollman.*

### PSYC 251: Child and Adolescent Development

(1 Unit)
Prerequisite: PSYC 101.
Focuses on physical, cognitive, social and emotional development with emphasis on the periods of infancy, childhood and adolescence. Reviews methods for studying the developing person and major theoretical approaches. *Elischberger, Francis, Keyes, Staff.*

### PSYC 101: Introduction to Psychology

(1 Unit)
An introduction to psychology's major areas of study, theoretical approaches, empirical findings, and research methodologies. Provides students with a broad overview of the field of psychology and examines the nature of psychology as a discipline. Addresses Psychology's major sub-disciplines, which range from the borders of biology to the borders of computer science to the borders of sociology. Introduction to Psychology is a prerequisite for all other psychology courses. *Staff.*

# Elementary Education Concentration (PK-3/3-6)

The new Elementary Education Concentration is in compliance with the Michigan Department of Education's newly revised teacher certification structure and standards for preparation for PK-3 and 3-6 grade bands (approved by the State Board of Education in November 2019).

Students interested in pursuing a concentration for elementary education (PK-3; PK-3/3-6) are also required to complete a major with an education concentration. Students are encouraged to consult with the Education Department for guidance before beginning a program of study.

## Required Courses for PK-3/3-6:

### EDUC 110: Exploring Teaching Colloquium

.25 unit
Exploration of educational careers and options for teacher certification. Students will document a minimum of ten hours of clinical experience observing in varied educational settings and grade levels. *Staff*

### EDUC 195: Education Foundations: Access, Equity and Advocacy

1 Unit
Introductory course for students interested in exploring the field of education, TESL, and PK-12 education with teacher certification. An overview of the historical, social, political, multicultural, and philosophical foundations of education.

Provides the larger conceptual perspectives necessary for studying teaching, learning and education and critically examines the power relationships among teachers, schools and society. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers PK-12, the Michigan Core Teaching Practice with explicit emphasis on building relationships and creating equitable learning environments for ethnolinguistically diverse students. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee. Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. *Staff*

## EDUC 196: Learner-Centered Approaches, Supports and Technologies

1 Unit
Prerequisites: EDUC 195 and a minimum cumulative GPA of 2.5.
Introductory course for students interested in PK-12 education with teacher certification. Emphasizes understanding and application of learner-centered approaches, supports and technologies as well as social-emotional learning. These are essential in understanding and supporting personal and professional growth, as well as in understanding diverse PK-12 learners and the development of the whole child. These will be explored in greater depth in all subsequent education courses. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for the Preparation of Teachers PK-12, Early Childhood Quality Standards, the Michigan Core Teaching Practices and special education. *Staff*

## EDUC 249: Social Studies Pedagogy in Elementary Schools: Inquiry and Civic Engagement in a Diverse World

1 Unit
Prerequisites: EDUC 195, EDUC 196 and permission of Education Department
Supports elementary education students in developing pedagogical knowledge and skills through the exploration of professional and theoretical literature, projects and field-based teaching experiences. Required professional sequence course for all elementary education prospective teachers. Students will develop strategies for connecting the interrelated content in disciplines to the development of children as citizens of the world. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for the Preparation of Teachers PK-3, the Michigan Core Teaching Practices. *Staff*

## EDUC 269: Science Pedagogy in Elementary Schools: Inquiry and Sustainability in a Diverse World

(1 Unit)
Prerequisites: EDUC 195, EDUC 196 and permission of department.
Inquiry-oriented, project-based coursework of pedagogical content for education students in STEM fields to develop knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences working with 21st century skills and technology. Requires planning and preparation, engagement in classroom environments, instruction in classroom environments, and formative and summative reflection. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers of Lower Elementary (PK-3) Education, and the Michigan Core Teaching Practices. *Staff.*

## EDUC 271: Literacy Pedagogy in Elementary Schools: Contexts, Motivation and Engagement

1 unit
Prerequisites: EDUC 195 , EDUC 196  and permission of department.
Examines relevant research base and theory on early literacy acquisition and learning contexts, motivation, engagement and assessments. Looks at culturally responsive pedagogy with children from a variety of cultural, economic, ethno-linguistic and racial backgrounds. Emphasizes the knowledge, practices, and strategies needed to address all of the constructs of literacy developing in an integrated manner and in the service of meaningful listening, speaking, reading, writing, viewing and visually representing. Requires planning and preparation, engagement in classroom environments, instruction in classroom environments, and formative and summative reflection. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers of Lower Elementary (PK-3) Education, Early Childhood Quality Standards, and the Michigan Core Teaching Practices. *Shanton, Staff.*

## EDUC 300: Eligibility for Teacher Certification

.25 unit
Prerequisites: EDUC 195, 196 and permission of department.
Eligibility for teacher certification requires completion of many steps, including successful passage of Michigan Tests for Teacher Certification (American Council on the Teaching of Languages Oral Proficiency Interview also required for world language teachers). This course will provide students with the skills to take initiative in planning and accessing resources. Students may choose to take this course more than one time. *Staff*

## EDUC 355: Mathematics Pedagogy in Elementary Schools: Context, Motivation and Engagement

(1 Unit)
Prerequisites:  EDUC 195 , EDUC 196  and Permission of the Education Department.
Examines relevant research base and theory on early mathematics learning, assessments and pedagogical approaches.  Looks at culturally responsive pedagogy with children from a variety of cultural, economic, ethno-linguistic and racial backgrounds.  Emphasizes mathematics-specific teaching in terms of high-leverage knowledge, practices, and strategies needed to address all of the constructs of mathematics developing in an integrated manner and in the service of meaningful learning and success. Requires planning and preparation, engagement in classroom environments, instruction in classroom environments, and formative and summative reflection.  A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers PK-3 and 3-6, Early childhood Quality Standards, ad the Michigan Core Teaching Practices. *Staff*

## EDUC 363: Supplemental Preparation for Teaching Grades 3-4

.25 unit
Prerequisites: EDUC 195, 196 and permission of department.
This course supports prospective teachers to extend their certification to include grades 3-6. Students will further develop communication, analytical skills, creativity, and in-depth exploration of teaching and learning in 37. 5 hours of clinical experiences across grades 3-4 in elementary schools. *Staff*

## EDUC 364: Supplemental Preparation for Teaching Grades 5-6

.25 unit
Prerequisites: EDUC 195, 196 and permission of department.
This course supports prospective teachers to extend their certification to include grades 3-6. Students will further develop communication, analytical skills, creativity, and in-depth exploration of teaching and learning in 37. 5 hours of clinical experiences across grades 5-6 in elementary schools. *Staff*

## EDUC 371: Literacy Essentials for Elementary Curriculum Design and Assessment

(1 Unit)
Prerequisites: EDUC 195 , EDUC 196 and permission of department.
Examines relevant research base and theory on early literacy acquisition and learning processes, assessments, and pedagogical approaches. Looks at culturally responsive pedagogy with children from a variety of cultural, economic, ethno-linguistic and racial backgrounds. Emphasizes the motivations, knowledge, practices, and strategies involved in teaching and learning. Requires planning and preparation, engagement in classroom environments, instruction in classroom environments, and formative and summative reflection. Twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers of Lower Elementary (PK-3) Education, Early Childhood Quality Standards, and the Michigan Core Teaching Practices. This course is required for all K-12 French, German and Spanish majors. *Shanton.*

## EDUC 396: Boundary Crossings in Elementary Schools

(1 Unit)
Prerequisites: EDUC 202, EDUC 203.
Focuses on learning about and working in the Albion Public Schools with children/youth from different backgrounds. Combines curriculum and classroom management theory and practice, and emphasizes exploring and developing integrative and creative teaching skills before doing the student teaching semester. Note: This Maymester course/experience begins during the spring semester and extends for three and one-half weeks after the spring semester for all junior elementary teacher education students. *Shanton, Staff.*

## EDUC 421: Student Teaching, Grades PK-3 and/or 3-6

(3 Units)
Prerequisites: All elementary education concentration courses need to be completed. Advising and permission from department.
Internship is completed in relevant subject areas at grades PK-3 and/or 3-6, under the supervision of a recommended and tenured teacher. Clinical experiences begin the first day of the semester, and ends on the penultimate week of classes. Support for and engagement in a student teaching internship are integral to the course. On-site guidance and supervision by a clinical experience supervisor occurs a minimum of five times across the semester.Instructor of record for the student teaching seminar also provides regular support for student teachers enrolled in the internship. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee (but can be reimbursed by the Shurmur Center). Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. Offered on a credit/no credit basis. Offered on a credit/no credit basis. *Staff.*

## EDUC 431: Seminar: Elementary Student Teaching

(1 Unit)
Prerequisite: Permission of department.
A capstone course reflecting on practice in the classroom. Focuses on professional development, portfolio design, technology integration and classroom management. Taken concurrently during student teaching semester. *Shanton.*

## ENGL 101W: College Writing

1 unit
An introduction to the idea and practice of college writing. Emphasizes writing as process, with close attention to

generation of ideas, clarity of expression at the sentence level, organization and logic of argumentation, conventions of academic discourse, and strategies for revision. *Staff*

### IDY 262: Arts Integrated Learning

(1 Unit)
Prerequisites: EDUC 195.
Introduces teacher certification candidates to basic elements of arts composition (space, time, energy), performance and artistic analysis as they relate to music, visual art, dance and theatre as well as the work of prominent artists within these disciplines. Creative assignments and lesson plans explored within the course are enacted in diverse learning environments. Culminating projects include the creation and presentation of original works of art, as well as reflection on personal and peer learning. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for the Preparation of Teachers PK-12, Early Childhood Quality Standards, and the Michigan Core Teaching Practices. *Staff.*

### MATH 104: Mathematics for Elementary Teachers

(1 Unit)
Prerequisite: MATH 100 or placement evaluation at the MATH 120 level or higher.
Priority given to students in the elementary education program. An investigation of mathematics (arithmetic, geometry, algebra, problem solving) for elementary school teachers. Topics are selected from: sets, relations and functions; numeration systems; whole numbers and their operations; number theory; rational numbers and fractions; decimals and real numbers; geometry and measurement; and probability and statistics. Emphasizes doing mathematics, using manipulatives, and developing intuition and problem-solving skills. Laboratory. *Bollman.*

### PSYC 101: Introduction to Psychology

(1 Unit)
An introduction to psychology's major areas of study, theoretical approaches, empirical findings, and research methodologies. Provides students with a broad overview of the field of psychology and examines the nature of psychology as a discipline. Addresses Psychology's major sub-disciplines, which range from the borders of biology to the borders of computer science to the borders of sociology. Introduction to Psychology is a prerequisite for all other psychology courses. *Staff.*

### PSYC 251: Child and Adolescent Development

(1 Unit)
Prerequisite: PSYC 101.
Focuses on physical, cognitive, social and emotional development with emphasis on the periods of infancy, childhood and adolescence. Reviews methods for studying the developing person and major theoretical approaches. *Elischberger, Francis, Keyes, Staff.*

# PK-12 Concentration

## Required Courses for PK-12 French, German, Spanish

Students who are interested in declaring a French, German or Spanish major with education concentration and PK-12 education concentration must schedule an appointment with the chair of the Modern Languages and Cultures Department to discuss their plan of study and options.

## EDUC 110: Exploring Teaching Colloquium

.25 unit
Exploration of educational careers and options for teacher certification. Students will document a minimum of ten hours of clinical experience observing in varied educational settings and grade levels. *Staff*

## EDUC 195: Education Foundations: Access, Equity and Advocacy

1 Unit
Introductory course for students interested in exploring the field of education, TESL, and PK-12 education with teacher certification. An overview of the historical, social, political, multicultural, and philosophical foundations of education. Provides the larger conceptual perspectives necessary for studying teaching, learning and education and critically examines the power relationships among teachers, schools and society. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers PK-12, the Michigan Core Teaching Practice with explicit emphasis on building relationships and creating equitable learning environments for ethnolinguistically diverse students. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee. Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. *Staff*

## EDUC 196: Learner-Centered Approaches, Supports and Technologies

1 Unit
Prerequisites: EDUC 195 and a minimum cumulative GPA of 2.5.
Introductory course for students interested in PK-12 education with teacher certification. Emphasizes understanding and application of learner-centered approaches, supports and technologies as well as social-emotional learning. These are essential in understanding and supporting personal and professional growth, as well as in understanding diverse PK-12 learners and the development of the whole child. These will be explored in greater depth in all subsequent education courses. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for the Preparation of Teachers PK-12, Early Childhood Quality Standards, the Michigan Core Teaching Practices and special education. *Staff*

## EDUC 300: Eligibility for Teacher Certification

.25 unit
Prerequisites: EDUC 195, 196 and permission of department.
Eligibility for teacher certification requires completion of many steps, including successful passage of Michigan Tests for Teacher Certification (American Council on the Teaching of Languages Oral Proficiency Interview also required for world language teachers). This course will provide students with the skills to take initiative in planning and accessing resources. Students may choose to take this course more than one time. *Staff*

## EDUC 338: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Humanities

(1/2 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in English and world languages (French, German and Spanish) in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke, Shanton.*

Or

## EDUC 339: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Humanities

(1 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in English and world languages (French, German and Spanish) in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke, Shanton.*

## EDUC 371: Literacy Essentials for Elementary Curriculum Design and Assessment

(1 Unit)
Prerequisites: EDUC 195 , EDUC 196 and permission of department.
Examines relevant research base and theory on early literacy acquisition and learning processes, assessments, and pedagogical approaches. Looks at culturally responsive pedagogy with children from a variety of cultural, economic, ethno-linguistic and racial backgrounds. Emphasizes the motivations, knowledge, practices, and strategies involved in teaching and learning. Requires planning and preparation, engagement in classroom environments, instruction in classroom environments, and formative and summative reflection. Twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers of Lower Elementary (PK-3) Education, Early Childhood Quality Standards, and the Michigan Core Teaching Practices. This course is required for all K-12 French, German and Spanish majors. *Shanton.*

## EDUC 373: Literacy Pedagogy in Secondary Schools

(1 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Examines literacy pedagogy in the secondary content areas. Field experiences in public school classrooms provide opportunities to observe learners and to practice the skills, methods, and strategies for teaching content literacy. Should be taken the semester prior to student teaching. *Henke, Staff.*

## EDUC 396: Boundary Crossings in Elementary Schools

(1 Unit)
Prerequisites: EDUC 202, EDUC 203.
Focuses on learning about and working in the Albion Public Schools with children/youth from different backgrounds. Combines curriculum and classroom management theory and practice, and emphasizes exploring and developing integrative and creative teaching skills before doing the student teaching semester. Note: This Maymester course/experience begins during the spring semester and extends for three and one-half weeks after the spring semester for all junior elementary teacher education students. *Shanton, Staff.*

## EDUC 423: Student Teaching, Kindergarten through Grade 12 (K-12)

(3 Units)
Prerequisites: All K-12 education concentration courses need to be completed. Advising and permission from department.
Internship is completed in multiple grade levels (e.g., 6-8 & 9-12; K-5 & 9-12), under the supervision of a recommended and tenured teacher. Clinical experiences begin the first day of the semester, and ends on the penultimate week of classes. Support for and engagement in a student teaching internship are integral to the course. On-site guidance and supervision by a clinical experience supervisor occurs a minimum of five times across the semester. Instructor of record for the student teaching seminar provides regular support for student teachers enrolled in the internship. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan

State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee (but can be reimbursed by the Shurmur Center). Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. Offered on a credit/no credit basis. Offered on a credit/no credit basis. *Staff.*

### EDUC 432: Seminar: Secondary Student Teaching

(1 Unit)
Prerequisite: Permission of department.
A capstone course reflecting on practice in the classroom. Focuses on professional development, portfolio design, technology integration and classroom management. Taken concurrently during student teaching semester. *Henke.*

### PSYC 101: Introduction to Psychology

(1 Unit)
An introduction to psychology's major areas of study, theoretical approaches, empirical findings, and research methodologies. Provides students with a broad overview of the field of psychology and examines the nature of psychology as a discipline. Addresses Psychology's major sub-disciplines, which range from the borders of biology to the borders of computer science to the borders of sociology. Introduction to Psychology is a prerequisite for all other psychology courses. *Staff.*

### PSYC 251: Child and Adolescent Development

(1 Unit)
Prerequisite: PSYC 101.
Focuses on physical, cognitive, social and emotional development with emphasis on the periods of infancy, childhood and adolescence. Reviews methods for studying the developing person and major theoretical approaches. *Elischberger, Francis, Keyes, Staff.*

## Required Courses for PK-12, Music

Students who are interested in declaring Music major with education concentration must schedule an appointment with the chair of the Music Department to discuss their plan of study and options.

### EDUC 110: Exploring Teaching Colloquium

.25 unit
Exploration of educational careers and options for teacher certification. Students will document a minimum of ten hours of clinical experience observing in varied educational settings and grade levels. *Staff*

### EDUC 195: Education Foundations: Access, Equity and Advocacy

1 Unit
Introductory course for students interested in exploring the field of education, TESL, and PK-12 education with teacher certification. An overview of the historical, social, political, multicultural, and philosophical foundations of education. Provides the larger conceptual perspectives necessary for studying teaching, learning and education and critically examines the power relationships among teachers, schools and society. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers PK-12, the Michigan Core Teaching Practice with explicit emphasis on building relationships and creating equitable learning environments for ethnolinguistically diverse students. Students are required to access

the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee. Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. *Staff*

## EDUC 196: Learner-Centered Approaches, Supports and Technologies

1 Unit
Prerequisites: EDUC 195 and a minimum cumulative GPA of 2.5.
Introductory course for students interested in PK-12 education with teacher certification. Emphasizes understanding and application of learner-centered approaches, supports and technologies as well as social-emotional learning. These are essential in understanding and supporting personal and professional growth, as well as in understanding diverse PK-12 learners and the development of the whole child. These will be explored in greater depth in all subsequent education courses. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for the Preparation of Teachers PK-12, Early Childhood Quality Standards, the Michigan Core Teaching Practices and special education. *Staff*

## EDUC 300: Eligibility for Teacher Certification

.25 unit
Prerequisites: EDUC 195, 196 and permission of department.
Eligibility for teacher certification requires completion of many steps, including successful passage of Michigan Tests for Teacher Certification (American Council on the Teaching of Languages Oral Proficiency Interview also required for world language teachers). This course will provide students with the skills to take initiative in planning and accessing resources. Students may choose to take this course more than one time. *Staff*

## EDUC 328: Teaching of Choral Music in the Secondary School

(1 Unit)
Same as MUS 328. *Staff.*

## EDUC 325: Teaching of Music in the Elementary School

(1 Unit)
Offered in alternate years. Same as MUS 325. *Staff.*

## EDUC 322: Teaching of Instrumental Music in the Schools

(1 Unit)
Offered in alternate years. Same as MUS 322. *Staff.*

## EDUC 373: Literacy Pedagogy in Secondary Schools

(1 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Examines literacy pedagogy in the secondary content areas. Field experiences in public school classrooms provide opportunities to observe learners and to practice the skills, methods, and strategies for teaching content literacy. Should be taken the semester prior to student teaching. *Henke, Staff.*

## EDUC 396: Boundary Crossings in Elementary Schools

(1 Unit)
Prerequisites: EDUC 202, EDUC 203.
Focuses on learning about and working in the Albion Public Schools with children/youth from different backgrounds. Combines curriculum and classroom management theory and practice, and emphasizes exploring and developing integrative and creative teaching skills before doing the student teaching semester. Note: This Maymester course/experience begins during the spring semester and extends for three and one-half weeks after the spring semester for all junior elementary teacher education students. *Shanton, Staff.*

### EDUC 423: Student Teaching, Kindergarten through Grade 12 (K-12)

(3 Units)
Prerequisites: All K-12 education concentration courses need to be completed. Advising and permission from department.
Internship is completed in multiple grade levels (e.g., 6-8 & 9-12; K-5 & 9-12), under the supervision of a recommended and tenured teacher. Clinical experiences begin the first day of the semester, and ends on the penultimate week of classes. Support for and engagement in a student teaching internship are integral to the course. On-site guidance and supervision by a clinical experience supervisor occurs a minimum of five times across the semester. Instructor of record for the student teaching seminar provides regular support for student teachers enrolled in the internship. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee (but can be reimbursed by the Shurmur Center). Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. Offered on a credit/no credit basis. Offered on a credit/no credit basis. *Staff.*

### EDUC 432: Seminar: Secondary Student Teaching

(1 Unit)
Prerequisite: Permission of department.
A capstone course reflecting on practice in the classroom. Focuses on professional development, portfolio design, technology integration and classroom management. Taken concurrently during student teaching semester. *Henke.*

### PSYC 101: Introduction to Psychology

(1 Unit)
An introduction to psychology's major areas of study, theoretical approaches, empirical findings, and research methodologies. Provides students with a broad overview of the field of psychology and examines the nature of psychology as a discipline. Addresses Psychology's major sub-disciplines, which range from the borders of biology to the borders of computer science to the borders of sociology. Introduction to Psychology is a prerequisite for all other psychology courses. *Staff.*

### PSYC 251: Child and Adolescent Development

(1 Unit)
Prerequisite: PSYC 101.
Focuses on physical, cognitive, social and emotional development with emphasis on the periods of infancy, childhood and adolescence. Reviews methods for studying the developing person and major theoretical approaches. *Elischberger, Francis, Keyes, Staff.*

# Social Studies, with Education Concentration, B.A.

# Requirements for Major

## 14 Units Including:

- All courses for the major must be taken for a numerical grade.

### ANTH 238: South Asian Identities

(1 Unit)
ANTH 105 or SOC 101 or permission of instructor. ANTH 105 or SOC 101 or permission of instructor.
An introduction to the peoples and cultures of South Asia (Sri Lanka, India, Pakistan, Bangladesh, Nepal and Bhutan). Examines issues including caste, South Asian religions, family life, colonialism, communal violence, popular culture and the South Asian diaspora. *Chase.*

or

### ANTH 248: Global Africa

(1 Unit)
Prerequisite: SOC 101 or ANTH 105, or permission of instructor.
A survey of African cultural diversity past and present. Explores the lives and livelihoods of African peoples through ethnographic case studies that span the continent. Engages stereotypes and challenges the ways in which Africa is popularly depicted in the media. Considers key issues in anthropology, including colonialism, conflict, ecology, economic development, food security, gender, childhood, religion, health, humanitarianism and globalization. *Harnish.*

or

### ANTH 256: Native North America

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or ETHN 103 or permission of instructor.
The historical and anthropological study of Native peoples of North America, with an emphasis on the twentieth century. Topics include federal policy, political movements, gender, the construction of identities and relationships between scholars and Native communities. Same as HIST 256. *Staff.*

AND

### ANTH 240: Ancient Civilizations

(1 Unit)
Prerequisite: ANTH 105 or permission of instructor.
Although the human species has been on the planet in its present form for at least 100,000 years, complexly organized societies with cities, governments and organized religions did not emerge until the last 5,000. This phenomenon took place independently throughout the globe, and while some ancient civilizations collapsed, others became the foundations upon which the modern world was constructed. Why is this so? Through a comparative analysis of Mesopotamian, Egyptian, Indus, Maya, Aztec and Incan societies, among others, students will learn to analyze the factors that have led to the emergence and transformation of civilizations. *Chase.*

or

### SOC 235: Global Transformations

(1 Unit)
Prerequisite: ANTH 105 or SOC 101 or permission of instructor.
Is "globalization" just a marketing slogan or does it actually describe a process involving profound change in life on this planet? Topics include communication and transportation technologies, political and economic developments, commerce and consumerism in the modern world. Considers relationships between the global and the local and explores whether the changes associated with globalization are best considered as progress or problem. *Staff.*

AND

## E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

## E&M 102: The Economy and Financial Markets

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the macroeconomy and macroeconomic models with special emphasis on the role of financial markets, interest rates, the Federal Reserve, monetary and fiscal policy, and money and capital markets. *Hooks, Li.*

## GEOL 111: Geography and Geographic Information Systems

(1 Unit)
An introduction to the elementary principles, techniques and utility of geographic information systems (GIS) toward the study of world geography, as well as related concepts and techniques involved in creating and using digital maps. Shows how maps (particularly computer-generated maps) can help in displaying and analyzing geographic and other spatial data, and the use of these analyses in modeling cultural and natural systems. Some prior computer experience is helpful, but is not required. Lecture and laboratory. *McRivette.*

## HIST 102: Ancient and Medieval Worlds

(1 Unit)
A survey from 3000 B.C.E. to the Renaissance, including Mesopotamian, Greek, Roman, Carolingian and European societies. Religion, politics, war, thought, society and family issues will be discussed. *Staff.*

## HIST 111: East Asia: Cultures and Civilizations

(1 Unit)
A survey of the cultural, political and economic interactions among the societies of East Asia from the sixth century to the present, with an emphasis on the history of China, Japan and Korea. Major themes include the historical construction of "East Asian" regional identity; traditional culture; imperialism and colonialism; nationalist movements; and the debate over "Asian values" and modern economic development. *Ho.*

## HIST 131: The United States from Colonization to the Civil War

(1 Unit)
Introductory survey of United States history from pre-settlement of Europeans through the fall of Reconstruction. Examines the multicultural origins of the United States; the economic, social and political course to independence; the

early national period; the Jacksonian era; and the causes and results of the Civil War. Also focuses on historical methodology. *Sacks.*

### HIST 132: The United States: 1865-Present

(1 Unit)
Introductory survey of American civilization from 1865 to the present, encompassing the ways that Americans have responded to Reconstruction, Indians and the American West, the rise of the city, industrialization, immigration, imperialism, world wars, the atomic bomb, racial turmoil, changing roles of men and women, the rise of the welfare state, and envrionmental controversies, Recommended for pre-law students. *Dick Dick.*

### HIST 217: Europe's Age of Revolutions: The 19th Century

(1 Unit)
Europe from the French and Industrial Revolutions to the end of the First World War as reflected in history, literature and film. *Brade.*

- Two 300-level history electives (at least one unit of elective must be from African, Asian or Latin American history)

### PLSC 101: Politics of American Democracy

(1 Unit)
An overview of the dynamics and structure of the American political system: the Constitution, civil liberties, Congress, the Presidency, bureaucracy, interest groups, political parties, and voting behavior. Contrasts the principles of democratic action with a behind-the-scenes examination of how public policy is actually made. *Dabney, Grossman, Rose.*

### PLSC 235: American Foreign Policy

(1 Unit)
Exploration of the history of American foreign policy, covering leading theories that explain its shifting style, goals, and outcomes. *Grossman.*

## Completion of All Other Requirements for Teacher Certification

## Requirements for Secondary Certification

Students seeking secondary certification with a major in social studies are required to consult with the Education Department and meet admission requirements to the teacher education program (TEP). Certification in secondary education requires 25.5 units of course work and necessitates a ninth semester for student teaching.

- All courses must be taken for a numerical grade, except those offered only on a credit/no credit basis.

## Complete 7.5 Units of Professional Sequence Course Work and Four Units of Student Teaching:

### EDUC 110: Exploring Teaching Colloquium

.25 unit
Exploration of educational careers and options for teacher certification. Students will document a minimum of ten hours of clinical experience observing in varied educational settings and grade levels. *Staff*

## EDUC 195: Education Foundations: Access, Equity and Advocacy

1 Unit
Introductory course for students interested in exploring the field of education, TESL, and PK-12 education with teacher certification. An overview of the historical, social, political, multicultural, and philosophical foundations of education. Provides the larger conceptual perspectives necessary for studying teaching, learning and education and critically examines the power relationships among teachers, schools and society. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers PK-12, the Michigan Core Teaching Practice with explicit emphasis on building relationships and creating equitable learning environments for ethnolinguistically diverse students. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee. Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. *Staff*

## EDUC 196: Learner-Centered Approaches, Supports and Technologies

1 Unit
Prerequisites: EDUC 195 and a minimum cumulative GPA of 2.5.
Introductory course for students interested in PK-12 education with teacher certification. Emphasizes understanding and application of learner-centered approaches, supports and technologies as well as social-emotional learning. These are essential in understanding and supporting personal and professional growth, as well as in understanding diverse PK-12 learners and the development of the whole child. These will be explored in greater depth in all subsequent education courses. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for the Preparation of Teachers PK-12, Early Childhood Quality Standards, the Michigan Core Teaching Practices and special education. *Staff*

## EDUC 300: Eligibility for Teacher Certification

.25 unit
Prerequisites: EDUC 195, 196 and permission of department.
Eligibility for teacher certification requires completion of many steps, including successful passage of Michigan Tests for Teacher Certification (American Council on the Teaching of Languages Oral Proficiency Interview also required for world language teachers). This course will provide students with the skills to take initiative in planning and accessing resources. Students may choose to take this course more than one time. *Staff*

## EDUC 349: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Social Sciences

(1 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in history, political science, and psychology in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke.*

## EDUC 373: Literacy Pedagogy in Secondary Schools

(1 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Examines literacy pedagogy in the secondary content areas. Field experiences in public school classrooms provide opportunities to observe learners and to practice the skills, methods, and strategies for teaching content literacy. Should be taken the semester prior to student teaching. *Henke, Staff.*

## EDUC 397: Boundary Crossings in Secondary Schools

(1 Unit)
Prerequisites: EDUC 202, EDUC 203.
Focuses on learning about and working in the Albion Pubic Schools with youth from different backgrounds. Combines curriculum and classroom management theory and practice, and emphasizes exploring and developing integrative and creative teaching skills before doing the student teaching semester. Note: This Maymester course/experience begins during the spring semester and extends for three and one-half weeks after the spring semester for all junior secondary teacher education students. *Henke.*

## EDUC 422: Student Teaching, Grades 6 through 12 (6-12)

(3 Units)
Prerequisites: All secondary education concentration courses need to be completed. Advising and permission from department.
Internship is completed in relevant subject areas at grades 6-12, under the supervision of a recommended and tenured teacher. Clinical experiences begin the first day of the semester, and ends on the penultimate week of classes. Support for and engagement in a student teaching internship are integral to the course. On-site guidance and supervision by a clinical experience supervisor occurs a minimum of five times across the semester.Instructor of record for the student teaching seminar also provides regular support for student teachers enrolled in the internship. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee (but can be reimbursed by the Shurmur Center). Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. Offered on a credit/no credit basis. Offered on a credit/no credit basis. *Staff.*

## EDUC 432: Seminar: Secondary Student Teaching

(1 Unit)
Prerequisite: Permission of department.
A capstone course reflecting on practice in the classroom. Focuses on professional development, portfolio design, technology integration and classroom management. Taken concurrently during student teaching semester. *Henke.*

## PSYC 101: Introduction to Psychology

(1 Unit)
An introduction to psychology's major areas of study, theoretical approaches, empirical findings, and research methodologies. Provides students with a broad overview of the field of psychology and examines the nature of psychology as a discipline. Addresses Psychology's major sub-disciplines, which range from the borders of biology to the borders of computer science to the borders of sociology. Introduction to Psychology is a prerequisite for all other psychology courses. *Staff.*

## PSYC 251: Child and Adolescent Development

(1 Unit)
Prerequisite: PSYC 101.
Focuses on physical, cognitive, social and emotional development with emphasis on the periods of infancy, childhood and adolescence. Reviews methods for studying the developing person and major theoretical approaches. *Elischberger, Francis, Keyes, Staff.*

# Teaching English as a Second Language Minor

## Requirements for Minor in Teaching English as a Second Language

The minor for TESL provides students with a framework for conceptualizing language learning as well as the knowledge and skills to teach English as a second language in various settings. The TESL minor provides opportunities for making global connections to students' major areas of study and develops skills and competencies for working in diverse ethnolinguistic communities in the U.S. or abroad.

This interdisciplinary TESL minor is designed as an option for all Albion College students, whether enrolled in the teacher education program (TEP) with an elementary, secondary or PK-12 concentration or not. Students who are interested in declaring a TESL minor must schedule an appointment with the chair of the Education Department to discuss their plan of study and options. Please note: EDUC 195 , EDUC 303 and EDUC 304 are accompanied by a clinical experience placement in public schools, or other educational settings, and require completion of (1) Albion College Criminal History Check, (2) Internet Criminal History Access Tool search, and (3) Albion College educational records check.

## Requirements for the TESL Minor:

- A minimum of 5 units of coursework including: one unit in learning and learners (EDUC 195 ); one unit in cross-cultural comparisons & perspectives (see list of options or approval from Education Department chiar); one unit in English language (ENGL 303W ); one unit in theory, models and policy (EDUC 303); one unit in assessment, curriculum and standards (EDUC 304); and, one unit, prerequisite, in foreign/second language learning at the 102-level or higher.
- Students must receive prior written consent from the Education Department to apply a Directed Study—or other course not from the recommended list of options—as a substitute toward completion of the TESL minor. Requests should be sent directly to the chair of the Education Department and must have the signature and approval of the course instructor attached.

## Cross-cultural Comparisons & Perspectives (1 unit)

- ANTH/SOC 231: Understanding Media in a Globalized World

### SOC 356: Social Psychology: Sociological Perspectives

(1 Unit)
Prerequisite: SOC 101 and junior standing or permission of instructor.
The study of the relationship between personal experiences and society. Explores how our sense of self, identity, subjective experience, feelings, beliefs, and relationships to and interactions with others are shaped by and influence social life. Focuses on theoretical traditions and trends within micro-sociology and their applications and usefulness for empirical research. Special attention will be paid to connecting the micro-workings of social life to larger institutional, cultural and political processes and issues. *Melzer.*

## COMM 303: Communications in Sports Organizations

(1 Unit)
Provides an understanding of organizational communication theories and practices as they relate to the creation, maintenance, and change of culture and practices in sports organizations. This course will examine the impact of internal and external communication environments and how sports organizations adapt their communication and culture in response. Students will practice application, analysis, and critical thinking about communication in sports organizations through research projects. *Staff.*

- COMM 313: Intercultural Communication

## INTN 130: Introduction to International Studies

(1 Unit)
Introduces concepts of international studies with historical examples. Students are required to observe and analyze developments within a certain region, area, country or organization throughout the semester. *Yoshii.*

## INTN 370: Building on International and Intercultural Experiences

(1 Unit)
Designed for students (including international students at Albion College) who wish to integrate their experiences studying, working or living abroad with a deepened analytical understanding of international and intercultural issues. Students familiarize themselves with the most current scholarship on international studies. Through independent research, they advance their understanding of a particular international issue of their choice and hone their abilities to articulate this issue to an audience. *Yoshii.*

## PHIL 309: International Ethics and Global Development

(1 Unit)
Explores the ethics of development in an international context. What should development be? Who should play a role in bringing about development? Examines multiple answers to these questions via an understanding of global development ethical theories and approaches such as the basic human needs approach, the human rights approach, the theory of development as freedom, the capabilities approach, theories of justice, as well as utilitarianism and deontological approaches. Applies these development ethics frameworks to important international issues such as poverty, gender inequality, violence and insecurity, over-consumption and globalization. *Madhok.*

## PLSC 103: Introduction to International Politics

(1 Unit)
Examines and evaluates competing theoretical approaches ("paradigms") which seek to explain inter-state war, international institutions and the global economy. Explores scholarly debates about the implications of international anarchy and national sovereignty. Focuses on the causes of violent conflict, the emergence of human rights norms and international courts, the dilemmas of humanitarian intervention, and the implications of global inequality. Part I examines competing theoretical perspectives in the discipline; Part II,approaches to studying war, violence and conflict; Part III, international institutions; Part IV, issues related to the global economy and international development. *Grossman, Walling.*

## PLSC 336: International Relations

(1 Unit)
Prerequisites: PLSC 100 and one of either PLSC 102 or PLSC 103.

A study of the behavior of nations, including topics such as: national power, balance of power, deterrence, diplomacy, collective security, international law, international organization and disarmament. *Grossman, Walling.*

### PLSC 256: Human Rights

(1 Unit)
Introduces the key concepts and theoretical tools for understanding human rights and human rights policy in the context of the modern world. Examines human rights in a global comparative context with emphases on all the major world regions. Draws on the central theories and concepts of comparative politics and international relations to explain how and why governments protect (or fail to) human rights and to examine the intersection among citizens, governments, and non-governmental organizations that work to investigate and protect against human rights abuses. *Walling.*

### PLSC 357: International Law and Politics

(1 Unit)
Prerequisites: PLSC 100, PLSC 105.
Examines international law using a broad range of analytical tools to enable students to think critically about the origins and impact of international law. How do we explain where particular laws and norms come from? How do they affect the shape of global politics and the outcomes of particular events? How often do states obey international law, and why? Also examines substantive areas of international law such as the law of armed conflict, international humanitarian law, human rights, international criminal law and environmental law. *Walling.*

- WGS 116: Introduction to Gender Studies

### WGS 240: Sexualities, Histories and Culture

(1 Unit)
Examines how sexuality has emerged as the basis for academic inquiry and numerous identities in the late twentieth century. Part I examines the historical research on sexuality across various cultures, considering what changes, from economic through technological, have fostered the development of sexuality-related laws, restrictions, identities and opportunities. Part II traces the theories about contemporary identities that emerged from women's and gender studies research, assessing medical, academic, religious and legal institutions as well as the grassroots resistance and alternative naming presented by individuals and communities. In Part III, students in each class have the opportunity to determine some of the topics covered. *Staff*

## Prerequisite

Students with demonstrated foreign/second language learning will complete the foreign/second language prerequisite at the appropriate placement level as determined by the Modern Languages and Cultures Department (e.g., 201). Students who demonstrate native or near-native fluency in a language other than English will be considered as having met the prerequisite.

*Those students not seeking admission to the TEP would not be eligible to be endorsed with teaching ESL on initial teacher certification in Michigan; however, they would receive an Albion College certificate of completion of the TESL minor study program. This certificate can be reviewed by TESOL and recognized as meeting international TESL standards.

*Students seeking admission to the TEP may also complete the requirements for the TESL minor as part of completing either the elementary, secondary or K-12 teacher certification.

# English

# Faculty

**Danit Brown**, chair and associate professor.
B.A., Oberlin College; B.A., Tel Aviv University; M.F.A., Indiana University. Appointed 2005.

**Lauren Brown**, assistant professor.
B.A., SUNY, Geneseo; M.A., Binghamton University, Ph.D., Binghamton University. Appointed 2019.

**Nels A. Christensen**, associate professor.
A.B., California State University, Chico; M.A., Ph.D., Michigan State University. Appointed 2006.

**Ian F. MacInnes**, professor.
B.A., Swarthmore College; M.A., Ph.D., University of Virginia. Appointed 1994.

**Helena G. Mesa**, professor.
B.A., Indiana University; M.F.A., University of Maryland; Ph.D., University of Houston. Appointed 2003.

**Ashley Miller,** assistant professor.
B.A., Vassar College; M.A., Ph.D., Indiana University. Appointed 2015.

**Krista Quesenberry,** visiting assistant professor.
B.A., Ball State University; M.A., Pennsylvania State University, Ph.D., Pennsylvania State University. Appointed 2018.

**Jessica F. Roberts**, professor.
A.B., Dartmouth College; M.A., Ph.D., University of Michigan. Appointed 2005.

# Introduction

The Albion College English curriculum is designed to provide training in literary analysis, research, and written communication. The major prepares students to read critically, to evaluate information, and to express ideas with clarity and grace. The department offers courses in English and U.S. literatures and traditions, creative writing, journalism, and professional writing. The curriculum includes the intensive study of the works of major writers, major periods of literary history, and the development of literary types. Upper-division courses provide experience in critical approaches to literature; many explore certain theoretical considerations implicit in literary study, such as the question of canon formation and the impact of gender, race and ethnicity, and class on the creation and reception of literary works. Courses in writing and language are designed to develop students' mastery of their language and their capacity for rigorous analysis. The writing curriculum includes basic and advanced work in expository writing, poetry, fiction, and creative nonfiction.

English Department Website

# Career Opportunities

In addition to preparing students for the advanced study of language and literature, majoring in English is excellent preparation for professional study in law, linguistics, library science, higher education administration, marketing, and public relations. Trained to read carefully and write clearly, students go on to a wide variety of careers in which language and research play an important role, including journalism, editing and writing, and elementary and secondary teaching. Moreover, many students have chosen English as a second major in recent years, using it to extend and strengthen their preparation for medicine, business, and a variety of other fields.

# Special Features

English majors enjoy a rich variety of research, writing, and internship opportunities both on and off-campus. Writing and editorial positions on the online student newspaper and the annual literary magazine are available, and the department helps place students in off-campus programs in Great Britain, New York, Chicago, and Philadelphia. In the past several years, majors have completed off-campus internships with the Detroit Free Press, Priority Health, Dutton (an imprint of Penguin), and Donadio & Olson literary agency. Recent graduates have gone on to work for MLive, Quicken Loans, Comcast Sportsnet Chicago, and the Country Music Hall of Fame, as well as to publish books of poetry, fiction, and creative nonfiction.

The department encourages qualified and interested majors to consider writing an honors thesis in English during their senior year. Successful completion of the thesis results in graduation with departmental honors in English.

Outstanding English majors are invited to join the Joseph J. Irwin Society, the English Department honor society.

The English Department sponsors a series of programs each year which bring distinguished writers and critics to campus for readings, lectures, and meetings with classes. Campus visitors have included Carl Hiaasen, Natasha Tretheway, Jason Reynolds, Jaclyn Friedman, Rita Williams-Garcia, Kiese Laymon, Julianna Baggott, and Chen Chen.

# Departmental Policy on Advanced Placement Credit

Students who earn a 4 or 5 on the Advanced Placement (AP) exam in English literature and composition will receive credit for English 100X (elective credit). Students who earn a 4 on the AP exam in English language and composition will receive credit for English 100X (elective credit), those who earn a score of 5 will receive credit for ENGL 101.

# Student Learning Outcomes

**Literature Major Objectives**

1. identify and revise for sentence-level grammatical errors and stylistic effects

2. define and apply the terminology of literary study

3. identify the parts of a literary text, describe the relationship among those parts, and explain the way they work together to produce meaning

4. make and defend claims about how a literary text relates to its context and audience

5. articulate the value and consequence of imaginative literature

**Literature Minor Objectives**

1. identify and revise for sentence-level grammatical errors and stylistic effects

2. define and apply the terminology of literary study

3. identify the parts of a literary text, describe the relationship among those parts, and explain the way they work together to produce meaning

4. articulate the value and consequence of imaginative literature

**Creative writing objectives**

1. articulate the value and consequence of imaginative literature

2. identify the parts of a literary text, describe the relationship among those parts, and explain the way they work together to produce meaning

3. analyze and craft sentences that produce a variety of stylistic effects to evoke particular responses from the reader

4. produce original creative work that deliberately employs forms and techniques

5. articulate, evaluate, and justify creative choices at each stage of the revision process

6. exhibit the professional habits of creative writers: revision, workshopping, and submission for publication

**Professional writing objectives:**

1. identify and revise for sentence-level grammatical errors and stylistic effects

2. identify the parts of a document, describe the relationship among those parts, and explain the way they work together to produce meaning

3. articulate, evaluate, and justify professional writing choices at each stage of the revision process

4. produce professional documents that account for context and audience

5. use methods applicable in a variety of professional fields to convey information and express ideas

6. collaborate with other writers

# English Minor

## Requirements for Minor in English

This minor is constructed to accommodate any literature emphasis, whether broadly or specifically defined. The minor can provide a general overview, or it can be tailored to provide a specific focus as a complement for majors in history, American political thought, art history, or other fields.

## Six Units in English, Including:

## One of the Following:

### ENGL 102W: Honors College Writing

(1 Unit)
An honors level version of ENGL 101 for students with superior writing skills. Admission by placement only. (Not counted toward the major.) *Staff.*

with a grade of 2.0 or better or advanced placement in English

### One of the Following:

### Plus Any Two of the Following:

Note: only one of ENGL151 and ENGL 152 may be applied toward the minor.

#### ENGL 253: British Literature, 900-1660

(1 Unit)
A survey of representative works of English literature from *Beowulf* to Paradise Lost. Authors typically include Chaucer, Spenser, Shakespeare, Sidney, Donne, Wroth, Philips, and Milton. *MacInnes, Staff.*

#### ENGL 230: Defining the Human

(1 Unit)
Prerequisite: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
A survey of representative works of English literature from the seventeenth to the late nineteenth century. Authors typically include Dryden, Swift, Montagu, Pope, Johnson, Blake, Wordsworth, Coleridge, Austen, Tennyson, Hopkins, and Wilde. *Miller.*

### Additional Units

- Two at the 300-level or higher (excluding writing courses). (2 units)

### Note

Students who place higher than ENGL 101 or ENGL 101H on Albion College's writing placement exam may complete the minor with 5 units

All courses for the minor must be taken for a numerical grade, except those offered only on a credit/no credit basis.

## English, B.A.

### Requirements for Major

### Ten Units in English, Including:

### One of the Following:

#### ENGL 102W: Honors College Writing

(1 Unit)
An honors level version of ENGL 101 for students with superior writing skills. Admission by placement only. (Not counted toward the major.) *Staff.*

with a grade of 2.0 or better or advanced placement in English (1 unit)

### Any Three of the Following:

Note: only one of ENGL 151 or ENGL 152 may be applied toward the major.

#### ENGL 253: British Literature, 900-1660

(1 Unit)
A survey of representative works of English literature from *Beowulf* to Paradise Lost. Authors typically include Chaucer, Spenser, Shakespeare, Sidney, Donne, Wroth, Philips, and Milton. *MacInnes, Staff.*

#### ENGL 230: Defining the Human

(1 Unit)
Prerequisite: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
A survey of representative works of English literature from the seventeenth to the late nineteenth century. Authors typically include Dryden, Swift, Montagu, Pope, Johnson, Blake, Wordsworth, Coleridge, Austen, Tennyson, Hopkins, and Wilde. *Miller.*

### One of the Following:

### At Least Four Units in English Courses

At the 300-level or higher (only one may be a writing course). ENGL 303W is required for certification in secondary teaching. (4 units)

### Additional Unit

- One additional unit in English at the 200-level or higher (1 unit)

### Note

Students who place higher than ENGL 101 or ENGL 101H on Albion College's writing placement exam may complete the major with nine units.

All units used to fulfill major requirements must be taken for a numerical grade and may include a directed study only with special permission.

# English, Creative Writing Emphasis, B.A.

## Requirements for Major with Creative Writing Emphasis

### Ten Units in English, Including:

### One of the Following:

### ENGL 102W: Honors College Writing

(1 Unit)
An honors level version of ENGL 101 for students with superior writing skills. Admission by placement only. (Not counted toward the major.) *Staff.*

with a grade of 2.0 or better or advanced placement in English

## One Unit of the Following:

## One Unit of the Following:

## One Additional Writing Course From:

(Note: ENGL 203 is required for students in secondary education)

## One Unit of the Following:

Note: only one of ENGL 151 and ENGL152 may be applied toward the major.

### ENGL 253: British Literature, 900-1660

(1 Unit)
A survey of representative works of English literature from *Beowulf* to Paradise Lost. Authors typically include Chaucer, Spenser, Shakespeare, Sidney, Donne, Wroth, Philips, and Milton. *MacInnes, Staff.*

### ENGL 230: Defining the Human

(1 Unit)
Prerequisite: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
A survey of representative works of English literature from the seventeenth to the late nineteenth century. Authors typically include Dryden, Swift, Montagu, Pope, Johnson, Blake, Wordsworth, Coleridge, Austen, Tennyson, Hopkins, and Wilde. *Miller.*

## Four Additional Literature Courses Including:

At least two at the 300-level or higher and at least one focusing on the twentieth century.

### ENGL 251: Contemporary Literature

(1 Unit)
Prerequisite: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
A study of British and American writers whose major work has been done since 1945. *Staff*

### ENGL 358: Literature of the Great Lakes

(1 Unit)
Prerequisites: Sophomore standing or higher or permission of instructor.
A bioregional exploration of representative poems, novels, and essays written by Great Lakes authors. Typical authors include Richard Powers, Bonnie Jo Campbell, Lorine Niedecker, James Wright, Joseph Boyden, and Holling Clancy Holling. *Christensen.*

### ENGL 360: The Problem of Race in American Literature

(1 Unit)
Prerequisite: Sophomore standing or higher or permission of instructor.
An examination of a number of continuing problems expressed in American poetry, fiction, drama, and essays by white and black writers from the nineteenth to the twenty-first centuries. Writers include Larsen, Baldwin, Ellison, Beatty, Senna, O'Connor, and McCullers. *Lockyer*.

## Note

Students who place higher than ENGL 101 or ENGL 101H on Albion College's writing placement exam may complete the major with nine units.

All units used to fulfill major requirements must be taken for a numerical grade and may include a directed study only with special permission.

# English, Professional Writing Emphasis, B.A.

## Requirements for Major with Professional Writing Emphasis

## Ten Units in English, Including:

## One of the Following:

### ENGL 102W: Honors College Writing

(1 Unit)
An honors level version of ENGL 101 for students with superior writing skills. Admission by placement only. (Not counted toward the major.) *Staff.*
with a grade of 2.0 or better or advanced placement in English

## One of the Following:

## Any Two of the Following:

Note: ENGL 304W may be repeated for credit for a maximum of 2 units.

### COMM 306: Public Relations

(1 Unit)
A theoretical and practical examination of the public relations field, including internal and external communications as well as media relations. Students occasionally gain practical experience by participating in a major campaign. *Staff.*

## Any Two of the Following:

Note: only one of ENGL 151 or ENGL 152 may be applied toward the major.

### ENGL 253: British Literature, 900-1660

(1 Unit)
A survey of representative works of English literature from *Beowulf* to Paradise Lost. Authors typically include Chaucer, Spenser, Shakespeare, Sidney, Donne, Wroth, Philips, and Milton. *MacInnes, Staff.*

### ENGL 230: Defining the Human

(1 Unit)
Prerequisite: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
A survey of representative works of English literature from the seventeenth to the late nineteenth century. Authors typically include Dryden, Swift, Montagu, Pope, Johnson, Blake, Wordsworth, Coleridge, Austen, Tennyson, Hopkins, and Wilde. *Miller.*

## Additional Units

- Two additional English literature courses, at least one at the 300-level or above. (2 units)

## Note

Students who place higher than ENGL 101 or ENGL 101H on Albion College's writing placement exam may complete the major with nine units.

All nine units used to fulfill major requirements must be taken for a numerical grade and may include a directed study only with special permission.

# English, with Education Certification, B.A.

## Requirements for Major or Minor with Education Certification

## Elementary English Language Arts Major

Nine units in English, including

- Three units in literature, all of which must be at the 300-level or higher (3 units).

## One of the Following:

### ENGL 102W: Honors College Writing

(1 Unit)
An honors level version of ENGL 101 for students with superior writing skills. Admission by placement only. (Not counted toward the major.) *Staff.*

with a grade of 2.0 or better or advanced placement in English (1 unit)

## Any Three of the Following:

Note: only one of ENGL 151 and ENGL 152 may be applied toward the minor

### ENGL 253: British Literature, 900-1660

(1 Unit)
A survey of representative works of English literature from *Beowulf* to Paradise Lost. Authors typically include Chaucer, Spenser, Shakespeare, Sidney, Donne, Wroth, Philips, and Milton. *MacInnes, Staff.*

### ENGL 230: Defining the Human

(1 Unit)
Prerequisite: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
A survey of representative works of English literature from the seventeenth to the late nineteenth century. Authors typically include Dryden, Swift, Montagu, Pope, Johnson, Blake, Wordsworth, Coleridge, Austen, Tennyson, Hopkins, and Wilde. *Miller.*

## One Additional Unit in English at the 200-level or Higher.

Note: the elective may not be ENGL 303W, which is also required as part of the Elementary Education Planned Program.

## Note

Students who place higher than ENGL 101 or ENGL 101H on Albion College's writing placement exam may complete the minor with 8 units

# Secondary Education Major

Major course requirements same as for the English major, except that ENGL 303W must be included in the four 300-level courses.

# Secondary Education Minor

Six units in English, including

## One of the Following:

### ENGL 102W: Honors College Writing

(1 Unit)
An honors level version of ENGL 101 for students with superior writing skills. Admission by placement only. (Not counted toward the major.) *Staff.*

with a grade of 2.0 or better or advanced placement in English

### Any Two Units of the Following:

Note: Only one of ENGL 151 or ENGL 152 may be applied toward the major.

#### ENGL 253: British Literature, 900-1660

(1 Unit)
A survey of representative works of English literature from *Beowulf* to Paradise Lost. Authors typically include Chaucer, Spenser, Shakespeare, Sidney, Donne, Wroth, Philips, and Milton. *MacInnes, Staff.*

#### ENGL 230: Defining the Human

(1 Unit)
Prerequisite: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
A survey of representative works of English literature from the seventeenth to the late nineteenth century. Authors typically include Dryden, Swift, Montagu, Pope, Johnson, Blake, Wordsworth, Coleridge, Austen, Tennyson, Hopkins, and Wilde. *Miller.*

### One Unit of the Following:

### Two Units at the 300-level or Higher, Including:

### Note

Students who place higher than ENGL 101 or ENGL 101H on Albion College's writing placement exam may complete the minor with 5 units

### Note

All units for the major or minor must be taken for a numerical grade and may include a directed study only with special permission.

Completion of all other requirements for teacher certification.

# English, with Education Concentration, Minor

## Requirements for Major or Minor with Education Certification

### Elementary English Language Arts Major

Nine units in English, including

- Three units in literature, all of which must be at the 300-level or higher (3 units).

## One of the Following:

### ENGL 102W: Honors College Writing

(1 Unit)
An honors level version of ENGL 101 for students with superior writing skills. Admission by placement only. (Not counted toward the major.) *Staff.*
with a grade of 2.0 or better or advanced placement in English (1 unit)

## Any Three of the Following:

Note: only one of ENGL 151 and ENGL 152 may be applied toward the minor

### ENGL 253: British Literature, 900-1660

(1 Unit)
A survey of representative works of English literature from *Beowulf* to Paradise Lost. Authors typically include Chaucer, Spenser, Shakespeare, Sidney, Donne, Wroth, Philips, and Milton. *MacInnes, Staff.*

### ENGL 230: Defining the Human

(1 Unit)
Prerequisite: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
A survey of representative works of English literature from the seventeenth to the late nineteenth century. Authors typically include Dryden, Swift, Montagu, Pope, Johnson, Blake, Wordsworth, Coleridge, Austen, Tennyson, Hopkins, and Wilde. *Miller*.

## One Additional Unit in English at the 200-level or Higher.

Note: the elective may not be ENGL 303W, which is also required as part of the Elementary Education Planned Program.

## Note

Students who place higher than ENGL 101 or ENGL 101H on Albion College's writing placement exam may complete the minor with 8 units

# Secondary Education Major

Major course requirements same as for the English major, except that ENGL 303W must be included in the four 300-level courses.

# Secondary Education Minor

Six units in English, including

## One of the Following:

### ENGL 102W: Honors College Writing

(1 Unit)
An honors level version of ENGL 101 for students with superior writing skills. Admission by placement only. (Not counted toward the major.) *Staff.*

with a grade of 2.0 or better or advanced placement in English

## Any Two Units of the Following:

Note: Only one of ENGL 151 or ENGL 152 may be applied toward the major.

### ENGL 253: British Literature, 900-1660

(1 Unit)
A survey of representative works of English literature from *Beowulf* to Paradise Lost. Authors typically include Chaucer, Spenser, Shakespeare, Sidney, Donne, Wroth, Philips, and Milton. *MacInnes, Staff.*

### ENGL 230: Defining the Human

(1 Unit)
Prerequisite: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
A survey of representative works of English literature from the seventeenth to the late nineteenth century. Authors typically include Dryden, Swift, Montagu, Pope, Johnson, Blake, Wordsworth, Coleridge, Austen, Tennyson, Hopkins, and Wilde. *Miller.*

## One Unit of the Following:

## Two Units at the 300-level or Higher, Including:

## Note

Students who place higher than ENGL 101 or ENGL 101H on Albion College's writing placement exam may complete the minor with 5 units

## Note

All units for the major or minor must be taken for a numerical grade and may include a directed study only with special permission.

Completion of all other requirements for teacher certification.

# Ethnic Studies

# Faculty

**Dominick N. Quinney**, Associate Professor.
B.S., Ph.D., Michigan State University. Appointed 2013.

**Lucia Soriano**, Assistant Professor, Gender and Sexuality Studies and Ethnic Studies.
B.A. California Polytechnic University, M.A. Claremont Graduate University, Ph.D. Washington State University. Appointed 2021.

**Elizabeth Barrios**, Associate Professor.
B.A., Knox College; Ph.D., University of Michigan. Appointed 2016.

**Marcella D. Cervantes**, Assistant Professor.
B.S., University of Houston - Downtown; M.S., University of Oregon; Ph.D., University of Washington. Appointed 2017.

**Eric D. Hill**, Associate Professor.
B.A., Oglethorpe University; Ph.D., Arizona State University. Appointed 2010.

**Lynn Verduzco-Baker**, Associate Professor.
B.A., California State University, Fresno; M.S., Ph.D., University of Michigan. Appointed 2011.

# Introduction

Ethnic Studies is both the comparative study of ethnicity and the study of the culture and history of particular ethnic groups within the United States and other countries. As the study of ethnicity, ethnic studies examines factors that account for the creation and maintenance of ethnic identity, the development of ethnic stereotypes and prejudice, and the quality of ethnic relations. In regard to particular ethnic groups, ethnic studies encourages the exploration of the specific histories, values and contributions of the country's many constituent groups. Ethnic studies also provides the means to identify the prejudices and assumptions that have shaped traditional scholarship in the academic disciplines and to correct these biases.

# Career Opportunities

Knowledge of ethnic traditions and ethnic relations is sought after in many fields including but not limited to politics, social services, business, law, medicine and psychology-related careers. This demand recognizes both that America is an increasingly multicultural society and that business people and professionals need to know these multiple groups in order to serve them better.

# Student Learning Outcomes for the Major

**Structural Inequality**: Students will be able to describe the ways in which institutions impact opportunities available to people in different racial and ethnic groups

**Diversity**: Students will be able to describe key aspects of the culture, history, contributions, and identities of several ethnic groups

**Social Inequality**: Students will be able to explain how race, gender, ethnicity, and sexuality are interconnected and constructed in ways that perpetuate inequality, discrimination, and stereotypes

**Theory**: Students will be able to apply Ethnic Studies theories to analyze social phenomena and institutions

**Research Methods**: Students will be able to design and carry out data collection, analysis, and presentation of findings focused on race, ethnicity, nationalism, migration, or transnationalism within a local and global perspective.

# Student Learning Outcomes for the Minor

**Structural Inequality**: Students will be able to describe the ways in which institutions impact opportunities available to people in different racial and ethnic groups

**Diversity**: Students will be able to describe key aspects of the culture, history, contributions, and identities of several ethnic groups

**Social Inequality**: Students will be able to explain how race, gender, ethnicity, and sexuality are interconnected and constructed in ways that perpetuate inequality, discrimination, and stereotypes

# Ethnic Studies Minor

## Requirements for Minor

- Elective courses should be selected in consultation with an ethnic studies faculty member and reported to the Ethnic Studies Program chair.
- All courses must be taken for a numerical grade, except those offered only on a credit/no credit basis.

## Five Units, Including:

### ETHN 103: Introduction to Ethnic Studies

(1 Unit)
An introduction to the comparative study of ethnicity, as well as the history and culture of particular ethnic groups in America. Issues--ethnic identity, ethnocentrism, discrimination, assimilation and multiculturalism--are analyzed from a variety of disciplines in the humanities, social sciences and the arts. Serves as the introductory course for the ethnic studies concentration. *Staff.*

### ETHN 370: Theories and Methods in Ethnic Studies

(1 Unit)
Prerequisite: ETHN 103 or permission of instructor.
Designed as a capstone course to integrate students' Internship and course work experiences and deepen their analytical understanding of issues related to race/ethnicity. Examines the development of ethnic and race relations, ethnic and race discrimination, and American identity using different multicultural theoretical perspectives. Includes field work and/or other research on a topic related to race/ethnicity. *Staff.*

- Three units from the elective ethnic studies courses; and
- Elective ethnic studies courses must come from at least two of the lists below.

## Ethnic Studies Minor Electives

## List 1: Arts and Humanities*

## ARTH 312: Race and Its Representation in American Art

(1 Unit)
Examines representations of individuals and groups who traditionally have been viewed as "others": African Americans, Native Americans, Asians and Chicanos/Chicanas as contrasted with images of members of the dominant culture. Considers how visual art has served to reflect social conditions and situations and to construct identities for all ethnic groups in the American psyche. *Wickre.*

## ENGL 360: The Problem of Race in American Literature

(1 Unit)
Prerequisite: Sophomore standing or higher or permission of instructor.
An examination of a number of continuing problems expressed in American poetry, fiction, drama, and essays by white and black writers from the nineteenth to the twenty-first centuries. Writers include Larsen, Baldwin, Ellison, Beatty, Senna, O'Connor, and McCullers. *Lockyer.*

## ETHN 270: Hip Hop and Social Change

(1 Unit)
Investigates the social, cultural and political dynamics of the hip hop generation. Uses hip hop to frame the analysis of U.S. and urban "social problems" since the late 1960s. Introduces the sociohistorical and sociopolitical roots and development of hip hop, its impact on popular and youth culture, and its significance for understanding American society. Addresses major topics surrounding hip hop including race and ethnicity, gender and sexuality, social class, segregation/mass incarceration, politics, and education. Examines scholarly and popular texts, film, hip hop music, and original student work to gain a comprehensive understanding of these issues. *Quinney.*

## FREN 330: French Louisiana: The Cajun and Creole Experiences

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent.
A study of French Louisiana in both Acadiana and New Orleans, through literature, music, history and other avenues. *Guenin-Lelle.*

## MLAC 207: Race, Ethnicity and Diaspora in Latin America and the United States

(1 Unit)
This course explores the interconnected histories and cultures of Latin American nations and the United States. Special attention will be paid to the history, artistic production, and political movements of Indigenous populations, the African Diaspora, and immigrant groups throughout the Americas. *Staff.*

## SPAN 300: Spanish for Heritage Speakers

(1 Unit)
Prerequisite: Determined by Placement Exam or Instructor's Permission
The course is designed for students who were raised in a home where Spanish is spoken, who speak or understand Spanish, and are to some degree bilingual in English and Spanish. The course will include composition and conversation, with a focus on aspects of grammar and vocabulary that are of particular interest to heritage learners. Assignments will be based on a variety of readings about contemporary issues of importance to the Spanish-speaking world. Conducted in Spanish. Lecture *Staff*

### SPAN 362: Latinx Literature and Cultures in the United States

(1 Unit)
Proficiency Expected level of proficiency: SPAN 307 or SPAN 314 or SPAN 315, or permission of instructor.
Analysis of a special problem, topic, issue, phenomenon, period, author, genre or movement in U.S. Latino or Chicano literature and/or culture from its beginning to the present. Conducted in Spanish. *Staff.*

## List 2: Politics and Society*

### SOC 280: Children of Immigrants

(1 Unit)
SOC 101 or ETHN 103 or ANTH 105 or permission of instructor.
Same as ETHN 280. *Verduzco-Baker, Staff.*

### SOC 345: Race and Ethnicity

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or ETHN 103 or permission of instructor.
Alternative theories of racial and ethnic relations, and their application to groups within the United States. Particular attention will be focused on the reasons for ethnic conflict and strategies for conflict resolution. *Verduzco-Baker.*

### COMM 213: Intercultural Communication

(1 Unit)
An exploration of the role communication plays in defining and sustaining culture both globally and locally. By applying current research and theories in intercultural communication, students are introduced to major topics pertaining to communication between cultures. Topics include, but are not limited to: the way a culture's deep meaning structure impacts the way people communicate, culture-specific verbal and nonverbal norms, advice on verbal and nonverbal behavior when doing business internationally, adjusting to culture shock and exploring various subcultures in the United States. *Erlandson.*

### ETHN 250: Education and Diversity

(1 Unit)
This course introduces prospective educators to the ways in which social inequality affects schooling and schooling affects social inequality. This course is NOT a celebration of difference. Rather, this course is designed to allow students to examine how socially constructed categories (e.g., social class, race, gender, sexual orientation, disability, religion, etc.) are used to privilege some individuals and groups and marginalize others. The course focuses mostly on one social institution, urban public schools in the United States; however, we will examine how the other social institutions influence opportunities for success and failure in schools. *Quinney*

### ETHN 300: Social Movements

(1 Unit)
This course will review and discuss the theory and research on social movements, with an empirical emphasis on American movements such as the Civil Rights Movement, Women's Movement, and numerous "issue" movements such as peace, environment, neighborhood, sexuality, etc. We will give attention to international movements to develop an understanding of movements in different countries with a focus on structures and cultures. We will talk explicitly about the differences between movements enduring social cleavages such as race, class, gender, and sexuality. This

class generally operates from the intellectual standpoint of the activist who is concerned about an issue and wants to do something about it. *Quinney*.

### HIST 347: Race and Sports in America

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Sport has long occupied a place at the heart of American culture and society. Organized athletics have also served as symbolic sites of protest, power and inclusion for the nation's racial minorities. This course explores the history of American sports as a way to understand the profound impact that the phenomenon of athletic competition has had in the development of American race relations with particular attention paid to the experiences of African American athletes. *Sacks.*

### HIST 244: The Civil War and Reconstruction

1 Unit
*Sacks*

## List 3: History of Ethnic Communities*

### ANTH 238: South Asian Identities

(1 Unit)
ANTH 105 or SOC 101 or permission of instructor. ANTH 105 or SOC 101 or permission of instructor.
An introduction to the peoples and cultures of South Asia (Sri Lanka, India, Pakistan, Bangladesh, Nepal and Bhutan). Examines issues including caste, South Asian religions, family life, colonialism, communal violence, popular culture and the South Asian diaspora. *Chase.*

### ANTH 256: Native North America

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or ETHN 103 or permission of instructor.
The historical and anthropological study of Native peoples of North America, with an emphasis on the twentieth century. Topics include federal policy, political movements, gender, the construction of identities and relationships between scholars and Native communities. Same as HIST 256. *Staff.*

### HIST 142: Modern Latin America History

(1 Unit)
An introduction to Latin America from independence in the 1820s to the present. Native Americans, slaves and European immigrants struggled with elites to form societies of "order and progress." Films and oral histories show how the world economy affected working men and women and their responses: revolutions, religion, nationalism and popular politics. *Kanter.*

### HIST 242: African American History from Africa to the Civil War

(1 Unit)
A history of people of African descent in the United States from their African roots through the end of the Civil War. Stress on the development of slavery and racism in the colonial period; the tensions between slavery and freedom; slave

culture, family and religion; race relations in the North; and the black experience in the Civil War. Readings will be drawn from slave narratives as well as historical monographs. *Sacks.*

## HIST 243: African American History, 1865 to the Present

(1 Unit)
A history of black people in the United States from the end of the Civil War to the present. Stress on the rise and fall of Reconstruction, Jim Crow, black migration to the cities, the Harlem Renaissance, the civil rights movement and contemporary issues in race relations. *Sacks.*

## HIST 270: Latin American Immigration and the U.S.

(1 Unit)
Why do Latin Americans leave their countries? What are their experiences of entering and living in the U.S.? How has their emigration impacted both their homelands and U.S. society? Emphasis on Mexicans, Cubans, and Puerto Ricans in the twentieth century and the development of new "Latino" identities. *Kanter.*

## HIST 275: Mexican American History

(1 unit)
Explores the history of Mexican descent people in the U.S. from 1848 to the present. Particular stress on the evolving construction of Mexican American isentities through primary sources and literature. *Staff*

## HIST 298: The 1960s

(1 Unit)
In-depth examination of a tumultuous decade: civil rights and black power, student protest and New Left, counterculture and Woodstock generation, Vietnam and the anti-war movement, the "other America" and the War on Poverty, Silent Spring and Earth Day, liberation movements, JFK, LBJ, Martin Luther King, Malcolm X, Black Panthers, Detroit Riot, Freedom Summer, Jackson State, Kent State, Watergate, FBI, Feminine Mystique, Cesar Chavez, David Brower, and Rachel Carson. *Dick.*

## HIST 300: Slave Societies of the Americas

(1 Unit)
Prerequisite: enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Comparative study of the development of race-based slavery in Spanish America, Brazil, the Caribbean and the U.S. South. Discusses the Middle Passage, plantation life, slave religion, resistance, emancipation and its aftermath. Invites students to consider the history of ethnic relations within multiracial societies. *Staff*

## HIST 340: History of Women in the U.S., 1877-Present

(1 Unit)
Prerequisite: Previous course work in women's studies or history.
Does some shared history link American Indian girls sent to BIA boarding schools at the turn of the century with the immigrant girls who labored for the Triangle Shirtwaist Factory? How is "women's" history different? What difference does women's history make to U.S. history? This course considers such questions by examining the situations of women in the U.S. from 1877 forward. It introduces students to the theories and methods of women's history that scholars have developed over the last quarter century. Central to this course is the recognition that women's experiences

are not simple parallels to men's, and involve differences among women such as those based on sexuality, class, race and regional factors. *Franzen.*

### HIST 381: U.S. Immigration History

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
The story of uprooted ethnic, religious and racial groups from the first arrival in North America of Europeans through the age of American imperialism in the early twentieth century. The America of asylum and freedom is compared to the traditions of nativism and racism by examining Afro-, Asian-, Euro-, Mexican-, and Native American experiences. *Sacks.*

## Note

* Or courses approved by the Ethnic Studies Program.

# Ethnic Studies, B.A.

## Requirements for Major

## Eight Units, Including the Following:

Five units from an approved list of courses (see below). These courses, to be selected in consultation with the program chair, must include two at the 200-level and three at the 300-level. They must be selected from three different departments.

An ethnic studies-related internship (or off-campus experience), one unit. The internship, providing hands-on experience with other racial or ethnic communities, may be completed in ethnic communities elsewhere in the United States or in study and research in ancestral communities or multi-ethnic communities outside the United States. Students upon returning must schedule an appointment with the ethnic studies faculty and submit evaluation form(s) and journal report to the ethnic studies faculty on how their experience has enhanced their multicultural understanding of the world. Students, working in consultation with the program chair, are encouraged to explore a variety of options for the internship experience.

### ETHN 103: Introduction to Ethnic Studies

(1 Unit)
An introduction to the comparative study of ethnicity, as well as the history and culture of particular ethnic groups in America. Issues--ethnic identity, ethnocentrism, discrimination, assimilation and multiculturalism--are analyzed from a variety of disciplines in the humanities, social sciences and the arts. Serves as the introductory course for the ethnic studies concentration. *Staff.*

### ETHN 370: Theories and Methods in Ethnic Studies

(1 Unit)
Prerequisite: ETHN 103 or permission of instructor.
Designed as a capstone course to integrate students' Internship and course work experiences and deepen their analytical understanding of issues related to race/ethnicity. Examines the development of ethnic and race relations, ethnic and

race discrimination, and American identity using different multicultural theoretical perspectives. Includes field work and/or other research on a topic related to race/ethnicity. *Staff.*

## Ethnic Studies Major Electives

The following courses may be used to fulfill the elective component in the ethnic studies major.

### Anthropology and Sociology

#### ANTH 238: South Asian Identities

(1 Unit)
ANTH 105 or SOC 101 or permission of instructor. ANTH 105 or SOC 101 or permission of instructor.
An introduction to the peoples and cultures of South Asia (Sri Lanka, India, Pakistan, Bangladesh, Nepal and Bhutan). Examines issues including caste, South Asian religions, family life, colonialism, communal violence, popular culture and the South Asian diaspora. *Chase.*

#### ANTH 256: Native North America

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or ETHN 103 or permission of instructor.
The historical and anthropological study of Native peoples of North America, with an emphasis on the twentieth century. Topics include federal policy, political movements, gender, the construction of identities and relationships between scholars and Native communities. Same as HIST 256. *Staff.*

#### SOC 280: Children of Immigrants

(1 Unit)
SOC 101 or ETHN 103 or ANTH 105 or permission of instructor.
Same as ETHN 280. *Verduzco-Baker, Staff.*

#### SOC 345: Race and Ethnicity

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or ETHN 103 or permission of instructor.
Alternative theories of racial and ethnic relations, and their application to groups within the United States. Particular attention will be focused on the reasons for ethnic conflict and strategies for conflict resolution. *Verduzco-Baker.*

### Art History

#### ARTH 312: Race and Its Representation in American Art

(1 Unit)
Examines representations of individuals and groups who traditionally have been viewed as "others": African Americans, Native Americans, Asians and Chicanos/Chicanas as contrasted with images of members of the dominant culture. Considers how visual art has served to reflect social conditions and situations and to construct identities for all ethnic groups in the American psyche. *Wickre.*

### Communication Studies

### COMM 213: Intercultural Communication

(1 Unit)
An exploration of the role communication plays in defining and sustaining culture both globally and locally. By applying current research and theories in intercultural communication, students are introduced to major topics pertaining to communication between cultures. Topics include, but are not limited to: the way a culture's deep meaning structure impacts the way people communicate, culture-specific verbal and nonverbal norms, advice on verbal and nonverbal behavior when doing business internationally, adjusting to culture shock and exploring various subcultures in the United States. *Erlandson.*

## Economics and Management

### E&M 371: Issues in Modern Political Economy

(1 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
A non-technical course on selected legal and public policy issues related to the economy. Topics vary from term to term but could include such issues as equal employment opportunity and affirmative action, the use of economic analysis in setting public policy, and government's role in health care. Not offered every year. *Saltzman.*

### E&M 374: Labor Economics

(1 Unit)
Prerequisite: E&M 101.
An investigation of labor market decisions and outcomes; topics include labor supply and demand, earnings, discrimination and unemployment. Not offered every year. *Saltzman.*

## Education

### EDUC 202: Foundational Contexts of Education

(1 Unit)
An overview of the historical, social, political, multicultural and philosophical foundations of education. Provides the larger conceptual perspectives necessary for studying teaching, learning and education, and critically examines the relationship among teachers, schools and society. Seminar and field practicum. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee. Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. *Henke, Shanton.*

## English

### ENGL 360: The Problem of Race in American Literature

(1 Unit)
Prerequisite: Sophomore standing or higher or permission of instructor.
An examination of a number of continuing problems expressed in American poetry, fiction, drama, and essays by white and black writers from the nineteenth to the twenty-first centuries. Writers include Larsen, Baldwin, Ellison, Beatty, Senna, O'Connor, and McCullers. *Lockyer.*

## Ethnic Studies

### ETHN 250: Education and Diversity

(1 Unit)
This course introduces prospective educators to the ways in which social inequality affects schooling and schooling affects social inequality. This course is NOT a celebration of difference. Rather, this course is designed to allow students to examine how socially constructed categories (e.g., social class, race, gender, sexual orientation, disability, religion, etc.) are used to privilege some individuals and groups and marginalize others. The course focuses mostly on one social institution, urban public schools in the United States; however, we will examine how the other social institutions influence opportunities for success and failure in schools. *Quinney*

### ETHN 270: Hip Hop and Social Change

(1 Unit)
Investigates the social, cultural and political dynamics of the hip hop generation. Uses hip hop to frame the analysis of U.S. and urban "social problems" since the late 1960s. Introduces the sociohistorical and sociopolitical roots and development of hip hop, its impact on popular and youth culture, and its significance for understanding American society. Addresses major topics surrounding hip hop including race and ethnicity, gender and sexuality, social class, segregation/mass incarceration, politics, and education. Examines scholarly and popular texts, film, hip hop music, and original student work to gain a comprehensive understanding of these issues. *Quinney.*

### ETHN 280: Children of Immigrants

(1 Unit)
Prerequisite: SOC 101 or ETHN 103 or ANTH 105 or permission of instructor.
A study of theoretical arguments in the current literature on immigrant adaptation and assimilation, public fears of multiculturalism and an examination of empirical research into how social class, race/ethnicity and gender shape outcomes for 1½ and 2nd generation immigrants. Examines in depth the renegotiation of identity and the process of incorporation for immigrant families in the U.S. *Verduzco-Baker.*

### ETHN 300: Social Movements

(1 Unit)
This course will review and discuss the theory and research on social movements, with an empirical emphasis on American movements such as the Civil Rights Movement, Women's Movement, and numerous "issue" movements such as peace, environment, neighborhood, sexuality, etc. We will give attention to international movements to develop an understanding of movements in different countries with a focus on structures and cultures. We will talk explicitly about the differences between movements enduring social cleavages such as race, class, gender, and sexuality. This class generally operates from the intellectual standpoint of the activist who is concerned about an issue and wants to do something about it. *Quinney.*

## French

### FREN 330: French Louisiana: The Cajun and Creole Experiences

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent.
A study of French Louisiana in both Acadiana and New Orleans, through literature, music, history and other avenues. *Guenin-Lelle.*

# History

## HIST 142: Modern Latin America History

(1 Unit)
An introduction to Latin America from independence in the 1820s to the present. Native Americans, slaves and European immigrants struggled with elites to form societies of "order and progress." Films and oral histories show how the world economy affected working men and women and their responses: revolutions, religion, nationalism and popular politics. *Kanter*.

## HIST 242: African American History from Africa to the Civil War

(1 Unit)
A history of people of African descent in the United States from their African roots through the end of the Civil War. Stress on the development of slavery and racism in the colonial period; the tensions between slavery and freedom; slave culture, family and religion; race relations in the North; and the black experience in the Civil War. Readings will be drawn from slave narratives as well as historical monographs. *Sacks.*

## HIST 243: African American History, 1865 to the Present

(1 Unit)
A history of black people in the United States from the end of the Civil War to the present. Stress on the rise and fall of Reconstruction, Jim Crow, black migration to the cities, the Harlem Renaissance, the civil rights movement and contemporary issues in race relations. *Sacks.*

## HIST 244: The Civil War and Reconstruction

1 Unit
*Sacks*

## HIST 270: Latin American Immigration and the U.S.

(1 Unit)
Why do Latin Americans leave their countries? What are their experiences of entering and living in the U.S.? How has their emigration impacted both their homelands and U.S. society? Emphasis on Mexicans, Cubans, and Puerto Ricans in the twentieth century and the development of new "Latino" identities. *Kanter*.

## HIST 275: Mexican American History

(1 unit)
Explores the history of Mexican descent people in the U.S. from 1848 to the present. Particular stress on the evolving construction of Mexican American isentities through primary sources and literature. *Staff*

## HIST 300: Slave Societies of the Americas

(1 Unit)
Prerequisite: enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Comparative study of the development of race-based slavery in Spanish America, Brazil, the Caribbean and the U.S.

South. Discusses the Middle Passage, plantation life, slave religion, resistance, emancipation and its aftermath. Invites students to consider the history of ethnic relations within multiracial societies. *Staff*

### HIST 340: History of Women in the U.S., 1877-Present

(1 Unit)
Prerequisite: Previous course work in women's studies or history.
Does some shared history link American Indian girls sent to BIA boarding schools at the turn of the century with the immigrant girls who labored for the Triangle Shirtwaist Factory? How is "women's" history different? What difference does women's history make to U.S. history? This course considers such questions by examining the situations of women in the U.S. from 1877 forward. It introduces students to the theories and methods of women's history that scholars have developed over the last quarter century. Central to this course is the recognition that women's experiences are not simple parallels to men's, and involve differences among women such as those based on sexuality, class, race and regional factors. *Franzen.*

### HIST 298: The 1960s

(1 Unit)
In-depth examination of a tumultuous decade: civil rights and black power, student protest and New Left, counterculture and Woodstock generation, Vietnam and the anti-war movement, the "other America" and the War on Poverty, Silent Spring and Earth Day, liberation movements, JFK, LBJ, Martin Luther King, Malcolm X, Black Panthers, Detroit Riot, Freedom Summer, Jackson State, Kent State, Watergate, FBI, Feminine Mystique, Cesar Chavez, David Brower, and Rachel Carson. *Dick.*

### HIST 347: Race and Sports in America

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Sport has long occupied a place at the heart of American culture and society. Organized athletics have also served as symbolic sites of protest, power and inclusion for the nation's racial minorities. This course explores the history of American sports as a way to understand the profound impact that the phenomenon of athletic competition has had in the development of American race relations with particular attention paid to the experiences of African American athletes. *Sacks.*

### HIST 381: U.S. Immigration History

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
The story of uprooted ethnic, religious and racial groups from the first arrival in North America of Europeans through the age of American imperialism in the early twentieth century. The America of asylum and freedom is compared to the traditions of nativism and racism by examining Afro-, Asian-, Euro-, Mexican-, and Native American experiences. *Sacks.*

## Modern Languages and Cultures

### MLAC 207: Race, Ethnicity and Diaspora in Latin America and the United States

(1 Unit)
This course explores the interconnected histories and cultures of Latin American nations and the United States. Special

attention will be paid to the history, artistic production, and political movements of Indigenous populations, the African Diaspora, and immigrant groups throughout the Americas. *Staff.*

### Spanish

#### SPAN 300: Spanish for Heritage Speakers

(1 Unit)
Prerequisite: Determined by Placement Exam or Instructor's Permission
The course is designed for students who were raised in a home where Spanish is spoken, who speak or understand Spanish, and are to some degree bilingual in English and Spanish. The course will include composition and conversation, with a focus on aspects of grammar and vocabulary that are of particular interest to heritage learners. Assignments will be based on a variety of readings about contemporary issues of importance to the Spanish-speaking world. Conducted in Spanish. Lecture *Staff*

#### SPAN 362: Latinx Literature and Cultures in the United States

(1 Unit)
Proficiency Expected level of proficiency: SPAN 307 or SPAN 314 or SPAN 315, or permission of instructor.
Analysis of a special problem, topic, issue, phenomenon, period, author, genre or movement in U.S. Latino or Chicano literature and/or culture from its beginning to the present. Conducted in Spanish. *Staff.*

### Selected 189, 289, 389 Courses

(as approved by the ethnic studies chair)

# Gerald R. Ford Institute for Leadership in Public Policy and Service

# Staff

**Patrick A. McLean**, director, Gerald R. Ford Institute for Leadership in Public Policy and Service.
B.A., University of Dayton; M.A., Miami University (Ohio).

**Edward J. Visco**, associate director, Gerald R. Ford Institute for Leadership in Public Policy and Service.
B.A., Albion College; M.Ed., Chestnut Hill College.

# Introduction

President Gerald R. Ford created what is now the Gerald R. Ford Institute for Leadership in Public Policy and Service at Albion College in 1977. The Institute provides an opportunity for undergraduate-level students to explore policy issues more fully and to prepare future leaders in all fields through course work, service, internships and personal mentoring.

The Ford Institute concentration is open to students of all majors with a serious interest in public service. The program includes courses in ethics, public policy, and political science, as well as a range of choices from courses in economics

and management, English, modern languages, and communication. Students must be admitted to the Ford Institute to pursue this concentration. Visit the Ford Institute website for information on the application process.

The major in public policy provides students with an interdisciplinary approach to understanding how government works and why government decisions matter. It draws on the principles, practices, and research methods of the social sciences and philosophy to provide students with the theoretical and analytic skills relevant to today's most pressing global issues. The major prepares students for careers in government, for private-sector careers related to government policy, or for careers with a range of non-profits and international organizations. It also provides strong preparation for students planning on attending law school or earning a master's degree and/or Ph.D. in public policy, public administration, public health or social policy.

# Student Learning Objectives

# Law, Justice, and Society Concentration

For more information, contact the director of the concentration.

## Requirements for Law, Justice and Society Concentration

### A Total of Six Units Is Required for the Concentration

- All students must take this gateway course for the concentration, unless exempted by the director of the concentration.
- Four units, drawn from an approved list of courses, to be chosen in consultation with the director of the concentration. No more than two of the courses can be from the student's major.
- A program-related internship (one unit), to be approved by the director of the concentration.

#### LWJS 101: Introduction to Law, Justice, and Society

(1 Unit)
Explores the basic issues of law's relationship to contemporary society. Topics include the nature as well as historical and social functions of law; the culture and role of major legal actors in the legal system (e.g., lawyers, judges, juries, police, technology); the tension between ideals and realities in law; and the role of law in addressing contemporary social problems. Fosters analytical and critical skills. Serves as the gateway class to the concentration in law, justice, and society; however, registration is open to all interested students. *Rose.*

### The Approved Courses Include:

#### Anthropology

- ANTH 212: History of Sociological Thought

#### SOC 345: Race and Ethnicity

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or ETHN 103 or permission of instructor.

Alternative theories of racial and ethnic relations, and their application to groups within the United States. Particular attention will be focused on the reasons for ethnic conflict and strategies for conflict resolution. *Verduzco-Baker.*

## Communication Studies

- COMM 301: Studies in Free Speech

## Economics and Management

### E&M 353: Labor Law, Unions and Management

(1 Unit)
Prerequisite: Sophomore standing or permission of instructor.
Labor history, labor law, union-management relations, comparative labor movements. Student participation in a collective bargaining game. Not offered every year. *Saltzman.*

## English

### ENGL 360: The Problem of Race in American Literature

(1 Unit)
Prerequisite: Sophomore standing or higher or permission of instructor.
An examination of a number of continuing problems expressed in American poetry, fiction, drama, and essays by white and black writers from the nineteenth to the twenty-first centuries. Writers include Larsen, Baldwin, Ellison, Beatty, Senna, O'Connor, and McCullers. *Lockyer.*

## History

### HIST 340: History of Women in the U.S., 1877-Present

(1 Unit)
Prerequisite: Previous course work in women's studies or history.
Does some shared history link American Indian girls sent to BIA boarding schools at the turn of the century with the immigrant girls who labored for the Triangle Shirtwaist Factory? How is "women's" history different? What difference does women's history make to U.S. history? This course considers such questions by examining the situations of women in the U.S. from 1877 forward. It introduces students to the theories and methods of women's history that scholars have developed over the last quarter century. Central to this course is the recognition that women's experiences are not simple parallels to men's, and involve differences among women such as those based on sexuality, class, race and regional factors. *Franzen.*

### HIST 300: Slave Societies of the Americas

(1 Unit)
Prerequisite:  enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Comparative study of the development of race-based slavery in Spanish America, Brazil, the Caribbean and the U.S. South. Discusses the Middle Passage, plantation life, slave religion, resistance, emancipation and its aftermath. Invites students to consider the history of ethnic relations within multiracial societies. *Staff*

## Philosophy

### PHIL 107: Logic and Critical Reasoning

(1 Unit)
A study of the basic conceptual tools used to recognize, evaluate and express arguments. Designed for the student who wishes to reason more effectively and critically. Topics: inductive and deductive standards, truth, validity, fallacies, paradoxes, regresses, counterexamples, analogies, reductios, definitions, sophistries. *Mittag.*

### PHIL 201: Ethics

(1 Unit)
An examination and evaluation of the major ethical theories, both classical and contemporary, and the application of these theories to a current moral problem. *Madhok.*

### PHIL 202: Social Philosophy

(1 Unit)
An issues and historically oriented introduction to a broad range of philosophical subject matter and methodologies through a clarification and analysis of argumentation used to justify selected social and political institutions and practices—e.g., individual liberties, properties of personhood, the nature of the state, obligations and rights, etc. *Staff.*

### PHIL 206: Contemporary Moral Problems

(1 Unit)
An introduction to a broad range of philosophical subjects and methodologies through an examination and analysis of contemporary moral problems—e.g., abortion, euthanasia, genetic engineering, sexual morality, gender and racial discrimination, corporate crime, pornography and censorship, the death penalty, ecology, world hunger, etc. *Madhok.*

### PHIL 335: Philosophical Issues in the Law

(1 Unit)
Designed both for students interested in philosophy and for those interested in political science, history, economics, or sociology. Provides an explanation of legal concepts and institutions from the philosophical perspective. Develops in the student: (1) an understanding of some of the major philosophical issues in the law and (2) the ability to reflect critically upon them. *Madhok.*

## Political Science

### PLSC 312: American Political Development

(1 Unit)
Prerequisites: PLSC 100, PLSC 101.
Considers rotating topics: war, race, and organizational and institutional changes in historical context. Seminar themes include: the periodization of American history, national state formation, the political economy of industrialization and urbanization, and the social dynamics of continuity and change in the American political system. *Grossman.*

- PLSC 323: Introduction to American Constitutional Law

### PLSC 324: Civil Rights and Civil Liberties

(1 Unit)
Prerequisites: PLSC 100, PLSC 105.
Examines the American Constitution and some of the rights protected by it. Topics to be covered include: the role of the judiciary in protecting individual rights in a democratic context, methods of constitutional interpretation, incorporation, the right to bear arms, economic liberty, abortion and privacy rights, freedom of religion, freedom of speech, freedom of association, freedom of the press, the death penalty, and equal protection before the law. *Rose.*

## Religion

### RS 242: Christian Ethics

(1 Unit)
An introduction to the foundations and applications of Christian theological ethics. Investigates Christian perspectives on moral issues such as sex and marriage, medical ethics and social justice. *Mourad.*

## Women's and Gender Studies

### WGS 360: Feminist Theory

(1 Unit)
Prerequisite: WGS 106 or WGS 116 or permission of instructor.
Explores twentieth-century feminist thought from the United States and Great Britain with some attention to other influences. Grounds feminist theory within the grassroots women's movement, a social, cultural and political movement for change. Tracing the influence of feminism in the academy, the course surveys not only the critical and analytical foundations of the field of women's studies but also the impact of women and gender-centered scholarship on the traditional disciplines. The challenges to feminist theory raised by U.S. women of color, working-class women, lesbians and other women who have experienced multiple oppressions are explored along with the women's examinations of the intersections of sexism and racism, classism, homophobia and other systems of power. *Staff*

# Public Policy and Service Concentration

## Requirements for Concentration in Public Policy and Service

### PBSV 101: Introduction to Public Service

(1 Unit)
Prerequisite: Membership in the Gerald R. Ford Institute for Leadership in Public Policy and Service.
Introduces new Ford Institute students to public policy and public service issues. Examines a broad range of themes including ethics, civic engagement, the history of public service in the United States and contemporary public policy concerns. Offered in the fall. *McLean.*

### PLSC 101: Politics of American Democracy

(1 Unit)
An overview of the dynamics and structure of the American political system: the Constitution, civil liberties, Congress, the Presidency, bureaucracy, interest groups, political parties, and voting behavior. Contrasts the principles of democratic action with a behind-the-scenes examination of how public policy is actually made. *Dabney, Grossman, Rose.*

### PLSC 302: Public Policy, Interest Groups, and the American Welfare State

(1 Unit)
Prerequisites: Sophomore standing, PLSC 100 and PLSC 101.
This seminar analyzes the United States and the development of a robust middle-class welfare state: i.e., the "hidden" welfare state. While US centric, the seminar does not ignore a comparative analysis of other types of welfare states. The seminar analyzes key scholarship on contemporary state theory and American political development (APD) and engages broad questions about public policy, state formation, bureaucratic development, and the rise and fall of the New Deal/Administrative State (1932-1980). Emphasis will be on the fundamental role that interest group liberalism (IGL) has on the public policy arenas of: race relations, civil rights & civil liberties, healthcare, education, urban affairs, rural politics, and the way that IGL has configured law, legislation, and liberal democratic structures in the USA are the primary areas for analysis. The seminar will provide an opportunity for students that wish to in a purposely cross-disciplinary approach: an approach that draws heavily on scholarship in politics, history, and political sociology. *Staff*

### PBSV 397: Senior Colloquium

(1/2 Unit)
Prerequisite: Permission of instructor.
Analysis of selected public policy issues. Colloquium includes discussion of the economics, politics, social and ethical factors that go into the making of public policy. Offered in the spring. *McLean.*

(to be taken during spring of senior year, or junior year with permission of instructor)

## A Minimum of Six and One-half Units Including the Following:

Note: Students must be admitted to the Ford Institute for Leadership in Public Policy and Service to pursue this concentration.

- Internship (one unit)
- All courses for the concentration must be taken for a numerical grade, except those offered only on a credit/no credit basis.

## At Least One Unit Selected From:

### COMM 241: Public Speaking

(1 Unit)
A theoretical and practical study of speaking in public. Students are introduced to classical and contemporary critical standards of excellence in oral style and delivery, while they develop skills in the art of speaking effectively in informational and persuasive situations. *Staff.*

- COMM 245

### E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

- One semester of modern language at the 200-level or above

## At Least One Unit Selected From:

### PHIL 201: Ethics

(1 Unit)
An examination and evaluation of the major ethical theories, both classical and contemporary, and the application of these theories to a current moral problem. *Madhok.*

### PHIL 202: Social Philosophy

(1 Unit)
An issues and historically oriented introduction to a broad range of philosophical subject matter and methodologies through a clarification and analysis of argumentation used to justify selected social and political institutions and practices—e.g., individual liberties, properties of personhood, the nature of the state, obligations and rights, etc. *Staff.*

### PHIL 206: Contemporary Moral Problems

(1 Unit)
An introduction to a broad range of philosophical subjects and methodologies through an examination and analysis of contemporary moral problems—e.g., abortion, euthanasia, genetic engineering, sexual morality, gender and racial discrimination, corporate crime, pornography and censorship, the death penalty, ecology, world hunger, etc. *Madhok.*

### PHIL 301: Environmental Ethics

(1 Unit)
Examines theoretical and practical perspectives on ethical issues in relation to the environment. The theoretical issues range from whether we should assign moral value to species other than the human (and if so, on the basis of what criteria) to whether we have moral obligations to preserve the environment for future generations (and if so, what this would imply for the present generations). The practical issues range from creating incentives for restricting population growth without abdicating responsibilities toward the world's hungry, to the issue of what short-and long-term policies and practices need to be adopted to deal effectively with reducing pollution and hazardous waste while working toward a recycling, sustainable global society. *Madhok.*

### PHIL 302: Leadership Ethics

(1 Unit)
Examines the ethical foundations of leadership. Involves an in-depth discussion of foremost leadership theories and their applications to different contexts; critically examines the morally distinct aspects of leadership by looking at the relationships among power, self-interest, and morality; and analyzes leadership from within the ethical frameworks of virtue, duty, and utility along with discussing the ethical challenges of diversity (culture relativism, race, and gender) to traditional leadership ethics. *Madhok.*

### PHIL 303: Business Ethics

(1 Unit)
An examination of selected moral problems posed by corporate conduct—e.g., profit-maximization vs. social responsibility, corporate crime and the criminal justice system, business vs. environmental concerns, preferential hiring vs. reverse discrimination, employee autonomy vs. corporate loyalty, deception vs. honesty in advertising, corporate vs. government regulation. Clarification and critical examination of different ethical perspectives for resolving these moral dilemmas. *Madhok.*

### PHIL 304: Ethics and Public Policy

(1 Unit)
Emphasizes the ethical foundations of public policy. Rights, obligations, justice, autonomy, the nature of the good life: should these play a role in determining public policy, and if so, how? Focuses on the interaction between ethical values and public policy in areas such as health care, law, government, foreign policy, citizenship, education and media. *Madhok.*

### PHIL 308: Biomedical Ethics

(1 Unit)
The application of major ethical theories to some of the moral problems raised by recent developments in medical technology. Does increased medical knowledge (the end) justify experimentation with human subjects (the means)? How much should a patient be told and who decides? Do parents have the right to give birth to a defective infant and thereby apparently pollute the gene pool? To whom is the genetic counselor responsible—fetus, parent, future generations? Is there a right to die? Who should be the ultimate decision-maker—physician, patient, pastor? Is health care a right or a privilege? In answering these dilemmas, are there any moral rules to follow or does each person decide what is best in the situation? *Madhok.*

### PHIL 309: International Ethics and Global Development

(1 Unit)
Explores the ethics of development in an international context. What should development be? Who should play a role in bringing about development? Examines multiple answers to these questions via an understanding of global development ethical theories and approaches such as the basic human needs approach, the human rights approach, the theory of development as freedom, the capabilities approach, theories of justice, as well as utilitarianism and deontological approaches. Applies these development ethics frameworks to important international issues such as poverty, gender inequality, violence and insecurity, over-consumption and globalization. *Madhok.*

### PHIL 335: Philosophical Issues in the Law

(1 Unit)
Designed both for students interested in philosophy and for those interested in political science, history, economics, or sociology. Provides an explanation of legal concepts and institutions from the philosophical perspective. Develops in the student: (1) an understanding of some of the major philosophical issues in the law and (2) the ability to reflect critically upon them. *Madhok.*

### RS 242: Christian Ethics

(1 Unit)
An introduction to the foundations and applications of Christian theological ethics. Investigates Christian perspectives on moral issues such as sex and marriage, medical ethics and social justice. *Mourad.*

# Public Policy, B.A.

## Requirements for Major in Public Policy

- One unit from among an internship, Honors thesis, or directed study in public policy approved by the Ford Institute Internal Advisory Committee.

- A substantial paper and an oral presentation on a topic related to public policy. This paper and presentation will be completed as one of the requirements listed above.

## Five Units:

### E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

### E&M 201: Intermediate Microeconomics

(1 Unit)
Prerequisites: E&M 101: and MATH 120 or demonstrated proficiency, MATH 125, or MATH 141.
Theoretical analysis of consumer choice theory and demand, production and cost, the firm and market organization, distribution and general equilibrium, game theory. *Jaqua.*

### PHIL 304: Ethics and Public Policy

(1 Unit)
Emphasizes the ethical foundations of public policy. Rights, obligations, justice, autonomy, the nature of the good life: should these play a role in determining public policy, and if so, how? Focuses on the interaction between ethical values and public policy in areas such as health care, law, government, foreign policy, citizenship, education and media. *Madhok.*

### PLSC 302: Public Policy, Interest Groups, and the American Welfare State

(1 Unit)
Prerequisites: Sophomore standing, PLSC 100 and PLSC 101.
This seminar analyzes the United States and the development of a robust middle-class welfare state: i.e., the "hidden" welfare state. While US centric, the seminar does not ignore a comparative analysis of other types of welfare states. The seminar analyzes key scholarship on contemporary state theory and American political development (APD) and engages broad questions about public policy, state formation, bureaucratic development, and the rise and fall of the New Deal/Administrative State (1932-1980). Emphasis will be on the fundamental role that interest group liberalism (IGL) has on the public policy arenas of: race relations, civil rights & civil liberties, healthcare, education, urban affairs, rural politics, and the way that IGL has configured law, legislation, and liberal democratic structures in the USA are the primary areas for analysis. The seminar will provide an opportunity for students that wish to in a purposely cross-disciplinary approach: an approach that draws heavily on scholarship in politics, history, and political sociology. *Staff*

### PLSC 338: International Political Economy

(1 Unit)
Prerequisites: PLSC 100 and one of either PLSC 102 or PLSC 103.
An introduction to the study of political economy, i.e., the reciprocal relationship between political and economic activities and institutions, through an examination of the pursuit of wealth and power in the international system. Considers the strengths and weaknesses of different theoretical, analytical and ideological approaches to understanding

the international political economy in both historical and contemporary settings. Specific issues include trade, international finance, foreign investment, economic development, structural adjustments and globalization. *Grossman.*

## One Unit in Statistics Chosen from Among:

### E&M 200: Economic Statistics

(1 Unit)
Prerequisite: Math 120 or demonstrated proficiency, MATH 125, or MATH 141.
A first course in statistics with emphasis on regression analysis and its applications in economics and management. Not open to students who have taken MATH 209 or MATH 309. *Jaqua.*

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

## One Unit in Research Methods Chosen from Among:

### ANTH 325: Methods in Anthropology

(1 Unit)
ANTH 105, junior standing recommended
How do anthropologists practice their craft? What exactly do they do "out there" in the field and what is unique about their modes of studying the human experience? This course examines the primary methods and ethical issues involved in anthropological fieldwork. Particular attention will be paid to research design, participant observation, and the representation of cultures through ethnographic writing and museum curation. *Harnish.*

### E&M 300: Econometrics

(1 Unit)
Prerequisite: One of the following: MATH 209, MATH 309, or E&M 200.
An introduction to empirical work in economics and management. Topics covered include: hypothesis testing, estimation, correlation, and regression and related problems. Students use statistical software to access data sources and to write an empirical paper. Topics covered include: hypothesis Not offered every year. *Jaqua.*

### PLSC 100: Introduction to Political Inquiry

(1 Unit)
Examines the history of the discipline, and surveys principal approaches to describing and explaining political phenomena, including qualitative and quantitative analysis and moving from the behavioralism of the late 1940s, to critical theories, interpretive approaches, and rational choice models of later generations, and on to postmodern critiques challenging the idea that political science can be a science. *Dabney, Grossman, Rose, Walling.*

### SOC 324: Quantitative Social Research

(1 Unit)
Prerequisite: SOC 101 and junior standing, or permission of instructor.
An overview of quantitative social research methods and statistics. Topics include problem formulation and connection between theories and research; research designs, measurement and sampling techniques; ethical issues in research; data processing and data analysis with discussion of descriptive statistics; hypothesis testing and chi-square tests of significance; correlation; and multiple regression models. Students design and carry out their own independent research projects in addition to an extensive application of SPSS in laboratory assignments using secondary data. *Staff.*

## Two Units, Which Must Be Taken in Two Different Departments, Chosen from the Following Restricted Electives Related to Public Policy:

### SOC 345: Race and Ethnicity

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or ETHN 103 or permission of instructor.
Alternative theories of racial and ethnic relations, and their application to groups within the United States. Particular attention will be focused on the reasons for ethnic conflict and strategies for conflict resolution. *Verduzco-Baker.*

### SOC 370: Social Mobility and Inequity

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 and junior standing or permission of instructor.
An examination of the changing patterns of social stratification within the U.S. since World War II. Topics include income and wealth inequality, education and social mobility, the reorganization of the workplace, poverty and social welfare. *Verduzco-Baker.*

### E&M 202: Intermediate Macroeconomics

(1 Unit)
Prerequisites: E&M 101; E&M 102; and MATH 120 ro demonstrated proficiency, MATH 125, or MATH 141.
The development of macroeconomic theory and its application to government policy toward unemployment, inflation and growth. *Hooks, Li.*

### E&M 273: Environmental and Natural Resource Economics

(1 Unit)
Prerequisite: E&M 101.
Economic theory is used to examine environmental and natural resource problems and policies. *Staff.*

### E&M 371: Issues in Modern Political Economy

(1 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
A non-technical course on selected legal and public policy issues related to the economy. Topics vary from term to term but could include such issues as equal employment opportunity and affirmative action, the use of economic analysis in setting public policy, and government's role in health care. Not offered every year. *Saltzman.*

### E&M 372: Government Economics and Policy

(1 Unit)
Prerequisite: E&M 101.
Application of microeconomic analysis to expenditure and revenue decisions in the public sector, including rationale for government expenditures, criteria for revenue generation and the analysis of economic effects of major taxes. Not offered every year. *Hooks.*

## E&M 345: Money and Banking

(1 Unit)
Prerequisite: E&M 102.
Focuses on the Federal Reserve and its attempts to promote maximum sustainable economic growth. Other topics include the nature of money, the determination of interest rates, the financial system and financial institution operations, the structure of the Federal Reserve and the macroeconomics of inflation and growth. *Hooks, Li.*

## E&M 353: Labor Law, Unions and Management

(1 Unit)
Prerequisite: Sophomore standing or permission of instructor.
Labor history, labor law, union-management relations, comparative labor movements. Student participation in a collective bargaining game. Not offered every year. *Saltzman.*

## E&M 374: Labor Economics

(1 Unit)
Prerequisite: E&M 101.
An investigation of labor market decisions and outcomes; topics include labor supply and demand, earnings, discrimination and unemployment. Not offered every year. *Saltzman.*

## E&M 375: Health Economics

(1 Unit)
Prerequisite: E&M 101 or permission of instructor.
A microeconomic and institutional analysis of health care services in the U.S., with particular reference to issues of cost and access. Topics include the demand for medical care, health insurance, economic regulation of hospitals, the markets for physicians and medical education, and the political economy of health care. Not offered every year. *Saltzman.*

## EDUC 202: Foundational Contexts of Education

(1 Unit)
An overview of the historical, social, political, multicultural and philosophical foundations of education. Provides the larger conceptual perspectives necessary for studying teaching, learning and education, and critically examines the relationship among teachers, schools and society. Seminar and field practicum. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee. Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. *Henke, Shanton.*

## ENVN 220: Economics, Politics, and Environmental Policy

(1 Unit)
Examines decisions affecting environmental quality made by government, businesses and individuals; economic analysis relevant to such decisions; the policy-making process; and dispute resolution techniques that may be useful in conflicts over environmental issues. Focuses on current national and local environmental policies, with comparisons to practices in other countries. *Saltzman.*

## HIST 243: African American History, 1865 to the Present

(1 Unit)
A history of black people in the United States from the end of the Civil War to the present. Stress on the rise and fall of Reconstruction, Jim Crow, black migration to the cities, the Harlem Renaissance, the civil rights movement and contemporary issues in race relations. *Sacks.*

## PHIL 206: Contemporary Moral Problems

(1 Unit)
An introduction to a broad range of philosophical subjects and methodologies through an examination and analysis of contemporary moral problems—e.g., abortion, euthanasia, genetic engineering, sexual morality, gender and racial discrimination, corporate crime, pornography and censorship, the death penalty, ecology, world hunger, etc. *Madhok.*

## PHIL 301: Environmental Ethics

(1 Unit)
Examines theoretical and practical perspectives on ethical issues in relation to the environment. The theoretical issues range from whether we should assign moral value to species other than the human (and if so, on the basis of what criteria) to whether we have moral obligations to preserve the environment for future generations (and if so, what this would imply for the present generations). The practical issues range from creating incentives for restricting population growth without abdicating responsibilities toward the world's hungry, to the issue of what short-and long-term policies and practices need to be adopted to deal effectively with reducing pollution and hazardous waste while working toward a recycling, sustainable global society. *Madhok.*

## PHIL 302: Leadership Ethics

(1 Unit)
Examines the ethical foundations of leadership. Involves an in-depth discussion of foremost leadership theories and their applications to different contexts; critically examines the morally distinct aspects of leadership by looking at the relationships among power, self-interest, and morality; and analyzes leadership from within the ethical frameworks of virtue, duty, and utility along with discussing the ethical challenges of diversity (culture relativism, race, and gender) to traditional leadership ethics. *Madhok.*

## PHIL 303: Business Ethics

(1 Unit)
An examination of selected moral problems posed by corporate conduct—e.g., profit-maximization vs. social responsibility, corporate crime and the criminal justice system, business vs. environmental concerns, preferential hiring vs. reverse discrimination, employee autonomy vs. corporate loyalty, deception vs. honesty in advertising, corporate vs. government regulation. Clarification and critical examination of different ethical perspectives for resolving these moral dilemmas. *Madhok.*

## PHIL 308: Biomedical Ethics

(1 Unit)
The application of major ethical theories to some of the moral problems raised by recent developments in medical technology. Does increased medical knowledge (the end) justify experimentation with human subjects (the means)? How much should a patient be told and who decides? Do parents have the right to give birth to a defective infant and thereby apparently pollute the gene pool? To whom is the genetic counselor responsible—fetus, parent, future generations? Is there a right to die? Who should be the ultimate decision-maker—physician, patient, pastor? Is health care a right or a privilege? In answering these dilemmas, are there any moral rules to follow or does each person decide what is best in the situation? *Madhok.*

### PHIL 335: Philosophical Issues in the Law

(1 Unit)
Designed both for students interested in philosophy and for those interested in political science, history, economics, or sociology. Provides an explanation of legal concepts and institutions from the philosophical perspective. Develops in the student: (1) an understanding of some of the major philosophical issues in the law and (2) the ability to reflect critically upon them. *Madhok.*

### PLSC 214: Congress and the Presidency

(1 Unit)
An examination of the changing roles and responsibilities of Congress and the presidency with a focus on the changing political environment and the potential for leadership. *Grossman.*

### PLSC 322: Crime, Politics and Punishment

(1 Unit)
Prerequisites: PLSC 100, PLSC 105.
Whom a society punishes and how it punishes are key political questions as well as indicators of the character of the people in whose name it acts. This course examines connections between punishment and politics with particular reference to the contemporary American situation. *Rose.*

- PLSC 323

### PLSC 324: Civil Rights and Civil Liberties

(1 Unit)
Prerequisites: PLSC 100, PLSC 105.
Examines the American Constitution and some of the rights protected by it. Topics to be covered include: the role of the judiciary in protecting individual rights in a democratic context, methods of constitutional interpretation, incorporation, the right to bear arms, economic liberty, abortion and privacy rights, freedom of religion, freedom of speech, freedom of association, freedom of the press, the death penalty, and equal protection before the law. *Rose.*

- Substitution as approved by the Ford Institute director.

## Additional Requirements

Students who double major in public policy and another field may count up to one unit toward the requirements of both majors. If there is more than one unit of overlap between the majors, then the student must take additional electives in one of the majors to substitute for every unit of overlap beyond one in consultation with the department chair or program director.

Students who enroll in the Washington Semester program at the American University can receive up to two units of credit toward the requirements of the public policy major, subject to the approval of the Ford Institute director and the Ford Internal Advisory Committee.

# History

# Faculty

**Laura E. Brade,** assistant professor.

B.A., Pacific Lutheran University; M.A., Ph.D., University of North Carolina at Chapel Hill. Appointed 2017.

**Joseph W. Ho**, assistant professor.

B.A., University of California, San Diego.; M.A., Ph.D., University of Michigan. Appointed 2017.

**Marcy S. Sacks**, Julian S. Rammelkamp Professor of History. Department Chair
B.S., Cornell University; M.A., Ph.D., University of California, Berkeley. Appointed 1999.

**Christopher T. Riedel**, assistant professor.

B.A., University of Virginia; M.A., Boston College; Ph.D., Boston College. Appointed 2017.

**Abigail Meert**, assistant professor.

B.A., University of Michigan-Ann Arbor; M.A., Emory University; Ph.D., Emory University. Appointed 2022.

# Affiliated Faculty

**Trisha Franze**n, professor of women's and gender studies.
B.A., State University of New York, Buffalo; M.A., Ph.D., University of New Mexico. Appointed 2003.

**Midori Yoshii,** associate professor of international studies.
B.A., M.A., Tsuda College Tokyo; M.A., Ph.D., Boston University. Appointed 2004.

# Introduction

The History Department's mission asks:

How did people live in the past?
What forces and factors shaped their lives?
How did their choices shape the world we live in today?

The mission of the History Department is to foster creative and analytical thinkers who are interested in questions of how human societies change over time. History students learn to discern the institutional, ideological and material conditions that shape the ways in which people interact with one another, whether in the context of a given society or across societies. They learn that prevailing historical explanations are themselves subject to questioning and refashioning, and they become aware of how different explanations influence present-day perceptions. By analyzing primary and secondary sources and by communicating the results of their analysis in compelling, cogent prose, students also learn to become active participants in the writing and critiquing of history itself.

History Department Website

# Career Opportunities

As they study the past, history majors obtain analytical and writing skills and develop an appreciation of long-range trends. Graduates therefore enter fields from futures forecasting and management training to the law, public service and journalism. The knowledge gained as a history major can also lead to careers in teaching--secondary and college--as well as archival and museum work. Finally, students have the opportunity to experience personal development through the study of the past--useful in all careers, as in life itself.

Students planning graduate work in history should include advanced course work in at least one foreign language. Completion of a thesis is also highly recommended.

# Special Features

- Students are encouraged to participate in Albion's off-campus programs. Experience elsewhere in the U.S. or in a foreign country--whether for a summer, a semester or a year--provides a rich background for history majors.
- The faculty of the Department of History urge qualified and interested history majors to consider writing an honors thesis in history. Successful completion of the thesis will result in graduation with departmental honors in history. Candidates for honors must have a 3.0 grade point average or above in the major and must form a committee composed of two faculty members to supervise the thesis work. At least one of the committee members must be from the Department of History, although the department encourages the participation of faculty members from other disciplines and the pursuit of interdisciplinary work in general. The thesis may be based on earlier course work, but such papers must be significantly revised and expanded for submission as a departmental honors thesis.

Each thesis candidate must schedule at least one full unit of directed study (i.e., two 411s or one 412) in a semester (or semesters) immediately prior to the semester the thesis is due. It is recommended that a draft of the entire thesis be completed by the end of the last semester of directed study prior to the semester the thesis is due.

The name of each thesis candidate and the working title of the thesis must be submitted to the Prentiss M. Brown Honors Institute director one year before the thesis is submitted (typically Spring of Junior Year for May graduates). Students will submit the first rough draft to their committee members in the first semester of their senior year (for example, Fall of Senior Year for May graduates) and the final draft will be completed in the final semester. The Prentiss M. Brown Honors Institute will release precise deadlines each year. Each thesis committee will determine the procedures and schedule for meeting the completion deadline. Honors theses in history must conform to The Chicago Manual of Style. Copies of the guidelines for the preparation and submission of theses are available from the Brown Honors Institute director.

Departmental Policy on Advanced Placement Credit

Students who earn a 4 or 5 on the Advanced Placement (AP) exam in European history will receive one unit of credit for HIST 103.

Students who earn a 4 or 5 on the Advanced Placement exam in United States history will receive one unit of credit for HIST 101.

Students who earn a 4 or 5 on the Advanced Placement exam in world history will receive one unit of credit for HIST 190.

Only two 100-level history courses may be counted toward the history major.

# Student Learning Outcomes

Students who complete the History B.A. major can:

1. Develop an historical argument in writing
2. Apply critical thinking skills
3. Evaluate historical scholarship
4. Appreciate diverse perspectives
5. Create an original research project

Students who complete the History B.A. with Elementary or Secondary Education Certification BA can:

1. Develop an historical argument in writing
2. Apply critical thinking skills
3. Evaluate historical scholarship
4. Appreciate diverse perspectives
5. Create an original research project
6. Students will be able to complete requirements for eligibility for certification.

Students who complete the History minor can:

1. Develop an historical argument in writing
2. Apply critical thinking skills
3. Evaluate historical scholarship
4. Appreciate diverse perspectives

Students who complete the History minor with Elementary or Secondary Education Certification will be able to:

1. Develop an historical argument in writing
2. Apply critical thinking skills
3. Evaluate historical scholarship
4. Appreciate diverse perspectives
5. Students will be able to complete requirements for eligibility for certification.

# History Minor

## Requirements for Minor

- Five units in history, in at least three geographical fields.
- All courses must be taken for a numerical grade, except those offered only on a credit/no credit basis.
- No more than three 100-level units may be counted toward the minor.

# History Minor, with Education Concentration

## Requirements for Minor with Education Concentration

## Six Units in History, Including:

### HIST 102: Ancient and Medieval Worlds

(1 Unit)
A survey from 3000 B.C.E. to the Renaissance, including Mesopotamian, Greek, Roman, Carolingian and European societies. Religion, politics, war, thought, society and family issues will be discussed. *Staff.*

### HIST 111: East Asia: Cultures and Civilizations

(1 Unit)
A survey of the cultural, political and economic interactions among the societies of East Asia from the sixth century to the present, with an emphasis on the history of China, Japan and Korea. Major themes include the historical construction of "East Asian" regional identity; traditional culture; imperialism and colonialism; nationalist movements; and the debate over "Asian values" and modern economic development. *Ho.*

### HIST 131: The United States from Colonization to the Civil War

(1 Unit)
Introductory survey of United States history from pre-settlement of Europeans through the fall of Reconstruction. Examines the multicultural origins of the United States; the economic, social and political course to independence; the early national period; the Jacksonian era; and the causes and results of the Civil War. Also focuses on historical methodology. *Sacks.*

### HIST 132: The United States: 1865-Present

(1 Unit)
Introductory survey of American civilization from 1865 to the present, encompassing the ways that Americans have responded to Reconstruction, Indians and the American West, the rise of the city, industrialization, immigration, imperialism, world wars, the atomic bomb, racial turmoil, changing roles of men and women, the rise of the welfare state, and envrionmental controversies, Recommended for pre-law students. *Dick Dick.*

### HIST 217: Europe's Age of Revolutions: The 19th Century

(1 Unit)
Europe from the French and Industrial Revolutions to the end of the First World War as reflected in history, literature and film. *Brade.*

### HIST 300: Slave Societies of the Americas

(1 Unit)
Prerequisite:  enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Comparative study of the development of race-based slavery in Spanish America, Brazil, the Caribbean and the U.S. South. Discusses the Middle Passage, plantation life, slave religion, resistance, emancipation and its aftermath. Invites students to consider the history of ethnic relations within multiracial societies. *Staff*

## Completion of Education Concentration

# History, B.A.

## Requirements for Major

- A minimum of eight units in history, including two units from Asian and/or Latin American history, two units from European history, and two units from United States history.
- A minimum of one unit selected from courses numbered HIST 370 to HIST 402 (excluding HIST 388, HIST 389, HIST 391, HIST 392).
- All history courses must be taken for a numerical grade, except those offered only on a credit/no credit basis.
- No more than three 100-level units may be counted toward the major.
- No more than one unit of HIST 391, HIST 392 may be counted toward a major. Departmental approval is required.

**Note:** 300-level courses are open to sophomores, juniors and seniors.

# History, with Education Concentration, B.A.

## Requirements for Major with Education Concentration

## Nine Units in History, Including:

### HIST 102: Ancient and Medieval Worlds

(1 Unit)
A survey from 3000 B.C.E. to the Renaissance, including Mesopotamian, Greek, Roman, Carolingian and European societies. Religion, politics, war, thought, society and family issues will be discussed. *Staff.*

### HIST 111: East Asia: Cultures and Civilizations

(1 Unit)
A survey of the cultural, political and economic interactions among the societies of East Asia from the sixth century to the present, with an emphasis on the history of China, Japan and Korea. Major themes include the historical construction of "East Asian" regional identity; traditional culture; imperialism and colonialism; nationalist movements; and the debate over "Asian values" and modern economic development. *Ho.*

### HIST 131: The United States from Colonization to the Civil War

(1 Unit)
Introductory survey of United States history from pre-settlement of Europeans through the fall of Reconstruction. Examines the multicultural origins of the United States; the economic, social and political course to independence; the early national period; the Jacksonian era; and the causes and results of the Civil War. Also focuses on historical methodology. *Sacks.*

### HIST 132: The United States: 1865-Present

(1 Unit)
Introductory survey of American civilization from 1865 to the present, encompassing the ways that Americans have responded to Reconstruction, Indians and the American West, the rise of the city, industrialization, immigration, imperialism, world wars, the atomic bomb, racial turmoil, changing roles of men and women, the rise of the welfare state, and envrionmental controversies, Recommended for pre-law students. *Dick Dick.*

### HIST 217: Europe's Age of Revolutions: The 19th Century

(1 Unit)
Europe from the French and Industrial Revolutions to the end of the First World War as reflected in history, literature and film. *Brade.*

### HIST 300: Slave Societies of the Americas

(1 Unit)
Prerequisite: enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Comparative study of the development of race-based slavery in Spanish America, Brazil, the Caribbean and the U.S. South. Discusses the Middle Passage, plantation life, slave religion, resistance, emancipation and its aftermath. Invites students to consider the history of ethnic relations within multiracial societies. *Staff*

### HIST 382: STEM in East Asian History

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Explores the broad impacts of science, technology, environment, and medicine across East Asia from premodern periods to the present-day. We will investigate the ways in which the human body, space and place, and material-environmental interactions (ranging from manipulations of waterways to climate change) transformed East Asian and global histories. The course will focus on multidisciplinary, comparative approaches and topics including gendered forms of medicine and technology, regional and transnational environmental issues (natural, man-made, or both), and information flows between Asia and the world. *Ho.*

**OR**

- Another course numbered HIST 370 or above with prior approval of the History Department chair.
- Two elective history courses at the 200-level or higher (one of which must be in United States history).

## Completion of Education Concentration

# Honors Program

# Faculty and Staff

**Carrie Booth Walling**, associate director, Prentiss M. Brown Honors Program; professor of Political Science. B.A., Michigan State University; MScEcon, University of Wales, Aberystwyth; M.A, University of Minnesota; Ph.D., University of Minnesota.

**Joseph W. Ho**, Associate Director, Prentiss M. Brown Honors Program; Assistant Professor of History. B.A. in History (Honors with Highest Distinction) from the University of California, San Diego, and his M.A. and Ph.D. in History from the University of Michigan, Ann Arbor.

**Renee Kreger**, assistant director, Prentiss M. Brown Honors Program and Foundation for Undergraduate Research, Scholarship, and Creative Activity.

# Introduction

Although they are not separated from the campus at large, students in the Prentiss M. Brown Honors Program do enroll in four unique Honors seminar courses in their first three years. Great Issues in Science, Humanities, Social Science and Fine Arts all explore topics of current interest through the use of classical and contemporary readings. Through their small size, discussion format and emphasis on critical thinking and writing, these special courses encourage students to value ideas and to play active roles in their own intellectual development. They also fulfill the special core curriculum for Honors students.

**Admission**—Students must be admitted to the Prentiss M. Brown Honors Program. Visit the program's website for admission requirements and information on the application process.

# Student Learning Outcomes

- **Written and Oral Communication Skills** - students will be able to demonstrate effective written and oral communication skills.
- **Analytic Skills** - Students will be able to analyze and respond to scholarly arguments.
- **Creative Thinking** - Students will be able to synthesize ideas that cross disciplinary boundaries in creative or novel ways.
- **Critical Thinking** - Students will be able to design analytic arguments based on relevant evidence.
- **Interdisciplinary Thinking** - Students will be able to evaluate complex issues using an interdisciplinary perspective.

# For Thesis Work

- Students will be able to construct an original research project based on methods of inquiry within their specific field.

Program Requirements

# Program Requirements

In the "Academic at Albion" section of this catalog, the College's core curriculum is described. Parts II and III of this curriculum requires that all students take a course that will introduce them to each of the following five Modes of Inquiry and four Categories:

Modes of Inquiry:

1. Textual Analysis

2. Artistic Creation and Analysis
3. Scientific Analysis
4. Modeling and Analysis
5. Historical and Cultural Analysis

Categories:

1. Environmental Studies
2. Ethnicity Studies
3. Gender Studies
4. Global Studies

Since each Honors course fulfills a Modes of Inquiry or Category requirement of the College's core curriculum, Honors students can satisfy as many as four of this nine-course requirement with Honors classes. Additionally, Honors students can satisfy part of the College's distribution requirement (one fine arts course, two humanities courses, two science courses and two social science courses) by taking Honors seminars.

Students take four Honors courses, one from each of the four divisions of the College.

All courses to meet the Honors core must be taken for a numerical grade.

## To guide Honors students in their selection of Great Issues courses, the following numbering system is used:

### HSP 12xH: Great Issues in Science

(1 Unit)
A seminar for Prentiss M. Brown Honors Program students in which they read and discuss classic and modern works in the history, philosophy, methodology and ethics of science and technology. All seminars fulfill one of the Modes of Inquiry or Category requirements of the College's core curriculum. *Staff.*

### HSP 15xH: Great Issues in Social Science

(1 Unit)
A seminar for Prentiss M. Brown Honors Program students in which they read and discuss classic and modern works in the history, philosophy, methodology and ethics of science and technology. All seminars fulfill one of the Modes of Inquiry or Category requirements of the College's core curriculum. *Staff.*

### HSP 17xH: Great Issues in Fine Arts

(1 Unit)
A seminar for Prentiss M. Brown Honors Program students in which they explore, through representative readings, exhibits, concerts, performances and lectures, major issues in the development of the fine arts: the relationship between the artist and society, the evolution of critical theory in the arts and the nature of creativity. Individual courses may focus on the visual arts, music, theatre, film or dance. All seminars fulfill one of the Modes of Inquiry or Category requirements of the College's core curriculum. *Staff.*

- HSP 1x1H: Textual Analysis
- HSP 1x2H: Artistic Creation and Analysis
- HSP 1x3H: Scientific Analysis
- HSP 1x4H: Modeling and Analysis
- HSP 1x5H: Historical and Cultural Analysis
- HSP 1x6H: Environmental Category
- HSP 1x7H: Ethnicity Category

- HSP 1x8H: Gender Category
- HSP 1x9H: Global Category

### Note

For example, HSP 154H would be a Great Issues in Social Science seminar that satisfies the Modeling and Analysis Mode; HSP 126H would be a Great Issues in Science seminar that satisfies the Environmental Studies Category.

# Human Services

# Faculty

**Andrea P. Francis**, director, human services concentration; assistant professor of psychological science.
B.A., Colorado State University; M.A., Ph.D., Michigan State University.

**Barbara J. Keyes**, internship coordinator, human services concentration; professor of psychological science.
B.A., College of Wooster; M.A., Ph.D., Bowling Green State University.

Albion's human services concentration, which is selected in addition to an academic major, is designed to allow students to explore their interest in various human service careers, as well as to prepare them for entry-level positions upon graduation and/or for graduate school in human services disciplines. Students interested in the helping professions are expected to learn about underrepresented populations, administration and public policy, ethics, and professional practice. Human services promote physical and mental health through prevention, outreach, community organizing, and provision of services. Although human services workers will be employed primarily in applied settings, they may also have opportunities to conduct research that promotes physical and mental health.

**Admission**—Admission to the human services concentration is based on a genuine interest in exploring one or more of the human services areas and evidence of academic ability. Students must apply for admission to the concentration and are advised to do so during their sophomore year. For more information and an application form, contact the director of the human services concentration.

# Career Opportunities

Students who have completed the human services concentration may pursue entry level jobs right out of college, or they may go on to graduate school to earn any number of degrees, including an M.S.W. (social work), M.P.H. (public health) or an M.A. or Ph.D. (psychology, counseling). Careers in human services include: legal aid and advocacy; social justice; individual, marriage and family therapy; social work; child and family services; health and wellness; non-profit organizations; policy development; community service; and pastoral counseling.

# Student Learning Outcomes

1. Students will be able to identify conditions which promote or limit optimal daily functioning

    a. May include medically oriented, socially oriented, psychologically-behaviorally oriented, and educationally oriented functioning

2. Students will be able to explain interventions which promote growth and goal attainment

    a. May include assistance, referral, advocacy, or direct counseling

3. Students will be able to describe the nature of human systems: individual, group, organization, community and society, and their major interactions

4. Students will be able to apply ethical behavior within a Human Services framework

5. Students will be able to analyze the impact of diverse cultural values in Human Services

# Human Services Concentration

## Requirements for Human Services Concentration

## Eight Units Are Required for the Concentration

### HUSV 101: Introduction to Human Services

(1 Unit)
Acquaints the beginning student with the human services field, including the philosophy, values, methods and broad scope of the human services, and examines the student's motivation and values in relation to a career in a helping field. An interdisciplinary course designed specifically for the human services concentration. *Keyes, Staff.*

- Four units, drawn from an approved list of courses each focusing on a different area of competence, to be chosen in consultation with the director of the concentration. No more than two of the courses can be from the student's major.
- Two units of supplemental courses, to be chosen in consultation with the director of the concentration.
- Internship, one unit. See detailed information.

## The Approved Courses Include:

### Client Populations

### COMM 202: Communication in Interpersonal Contexts

(1 Unit)
The course examines the theory and research behind interpersonal communication. Explores communication processes in dyads, families, teams, and in organizational settings. Teaches skills to improve students' communication competence in both personal and professional environments. The course also covers self-awareness, self-disclosure, relational development, and conflict resolution. *Erlandson.*

### PSYC 251: Child and Adolescent Development

(1 Unit)
Prerequisite: PSYC 101.
Focuses on physical, cognitive, social and emotional development with emphasis on the periods of infancy, childhood and adolescence. Reviews methods for studying the developing person and major theoretical approaches. *Elischberger, Francis, Keyes, Staff.*

### PSYC 265: Psychology of Mental Illness

(1 Unit)
Prerequisite: PSYC 101.
This course offers an introduction to the historical origins, perspectives, theories, methods, and empirical findings of psychopathology and clinical psychology. Throughout the semester, students will gain greater understanding of the identification and treatment of psychological disorders. Students will be encouraged to critically examine the construct of mental health and to deepen their empathy for those experiencing mental illness through lecture, case study review, class assignments, and discussion. Throughout the course, students will be exposed to the complexities of human behavior and psychological difficulties, as well as the cultural, economic, and ethical issues that arise in diagnosing and treating mental illness. *Keyes, Staff.*

### PSYC 380: Introduction to Counseling

(1 Unit)
Prerequisites: PSYC 101, PSYC 204, PSYC 265, or permission of instructor.
A study of the major theories and current approaches to counseling and psychotherapy. Emphasizes important communication and introspection skills necessary in providing a helping relationship to another person. Opportunity is provided through experiential activities and personal reflection for students to learn and practice some of these basic skills in preparation for a future in counseling or related disciplines. *Staff.*

### SOC 222: Sociology of Childhood

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or permission of instructor.
Uses sociological theory and research findings to examine childhood and adolescence as historical constructs and social contexts (rather than developmental moments) and children as social actors in their own right (not only adults in the making). Pays particular attention to how race, class and gender shape experiences of childhood as we investigate what it means to be a child or adolescent in the United States, how children's lives are shaped by their social contexts and how children as social actors shape the worlds in which they live. *Verduzco-Baker.*

### SOC 280: Children of Immigrants

(1 Unit)
SOC 101 or ETHN 103 or ANTH 105 or permission of instructor.
Same as ETHN 280. *Verduzco-Baker, Staff.*

### SOC 360: Intimate Violence

(1 Unit)
Prerequisites: SOC 101 or WGS 111 and junior standing or permission of instructor.
Examines violence between intimates, primarily (but not solely) within the United States, covering a range of interpersonal relationships (children, parents, spouses, partners, acquaintances, siblings, etc.) as well as various forms of abuse (emotional, physical, neglect, sexual assault/rape, etc.) Traces intimate violence socio-historically, including theoretical, methodological, empirical and applied issues and debates within the field. Analyzes the incidence and prevalence of intimate violence, and, in the process, attempts to identify causes and solutions. Focuses on the importance of structural gender inequality in shaping individuals' violent behavior and the degree to which gender inequality influences various forms of violence. *Melzer.*

## Health

### E&M 375: Health Economics

(1 Unit)
Prerequisite: E&M 101 or permission of instructor.
A microeconomic and institutional analysis of health care services in the U.S., with particular reference to issues of cost and access. Topics include the demand for medical care, health insurance, economic regulation of hospitals, the markets for physicians and medical education, and the political economy of health care. Not offered every year. *Saltzman.*

## KIN 230: Human Systems Anatomy

(1 Unit)
This course is a study of the anatomical structure of the human body, from microscopic to gross structures across the organ systems. Of particular importance is: (1) the complementarity of human anatomy structure and function, (2) the interrelationships between organ systems, and (3) the application of anatomical knowledge to common diseases and clinical conditions. *Betz*

## KIN 206: Care and Prevention of Athletic Injuries

(1 Unit)
This course will provide a broad overview of athletic injuries and illnesses, preventative measures, and basic means of treatment for these injuries. The role of various allied health professions that come in contact with athletic injuries will be discussed. The topics covered will include epidemiology, athletic injuries/illnesses, injury prevention variables, and healthcare ethics. Basic prevention, evaluation, and care techniques of the most common injuries seen in the athletics setting will be discussed. Hands on skills learned in lab setting will include splinting, taping, and application of elastic wraps. *Staff.*

## PHIL 308: Biomedical Ethics

(1 Unit)
The application of major ethical theories to some of the moral problems raised by recent developments in medical technology. Does increased medical knowledge (the end) justify experimentation with human subjects (the means)? How much should a patient be told and who decides? Do parents have the right to give birth to a defective infant and thereby apparently pollute the gene pool? To whom is the genetic counselor responsible—fetus, parent, future generations? Is there a right to die? Who should be the ultimate decision-maker—physician, patient, pastor? Is health care a right or a privilege? In answering these dilemmas, are there any moral rules to follow or does each person decide what is best in the situation? *Madhok.*

## PSYC 230: Health Psychology

(1 Unit)
Prerequisites: PSYC 101 or permission of instructor.
The role of behavior in the prevention of disease and in the enhancement of health. Looks at behavior in relation to stress, pain, cardiovascular disease, cancer, alcohol abuse, weight control, psychoneuroimmunology. Contrasts biomedical and biopsychosocial approaches to health and disease. *Jechura.*

## PSYC 247: Drugs, Brain, and Behavior

(1 Unit)
Prerequisite: PSYC 101.
This course is intended as an introduction to the study of drug use, abuse, and addiction, with a focus on recreationally-used drugs. Basic principles of pharmacology and neural transmission will be examined to better understand how drugs

influence our brain and behavior. The impact of drug use on society, as well as intervention approaches, will be considered throughout the course. *Wieth, Wilson*

### RS 261: Death and Dying

(1 Unit)
Human longing for a meaningful explanation of the mystery of death and dying is deep and universal. This comparative course examines a wide array of beliefs and rituals related to death and dying in a select number of world religions. In addition to gaining intellectual familiarity with cross-cultural beliefs and practices, students will be encouraged to analyze familiar religious and cultural practices surrounding death and dying. *Valdina.*

## Organizational Structures and Public Policy

### EDUC 202: Foundational Contexts of Education

(1 Unit)
An overview of the historical, social, political, multicultural and philosophical foundations of education. Provides the larger conceptual perspectives necessary for studying teaching, learning and education, and critically examines the relationship among teachers, schools and society. Seminar and field practicum. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee. Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. *Henke, Shanton.*

### E&M 259: Managing People and Organizations

(1 Unit)
Prerequisite: Sophomore standing.
An introduction to organizational behavior, including analysis at the level of the individual group or team, and organization. Topics addressed include employee attitudes and job satisfaction, managerial decision making and problem solving, managing teams, conflict and negotiation, leadership, and organizational culture and design. *Baker, staff.*

### E&M 355: Human Resource Management

(1 Unit)
Prerequisite: Junior or senior standing.
An overview of personnel management, with an emphasis on the needs of the general manager rather than the personnel specialist. Topics include employee motivation, job enrichment, labor relations, grievances and discipline, recruitment and selection, equal employment opportunity, performance appraisal, compensation and employee benefits. *Baker, Saltzman.*

### E&M 359: Management

(1 Unit)
Prerequisite: Junior or senior standing, or permission of instructor.
An introduction to current management theory and practice. Traditional managerial functions such as planning, organizing and controlling are studied and contrasted with newer cross-functional approaches. *Baker, Bedient.*

### E&M 352: Negotiation and Dispute Resolution

(1 Unit)
Prerequisite: Junior or senior standing, or permission of instructor.
An introductory study of the theories and concepts related to negotiation and dispute resolution developed in such fields as microeconomics, psychology and industrial relations. Includes many role-playing exercises to provide students with practice in negotiation. *Saltzman.*

## PBSV 101: Introduction to Public Service

(1 Unit)
Prerequisite: Membership in the Gerald R. Ford Institute for Leadership in Public Policy and Service.
Introduces new Ford Institute students to public policy and public service issues. Examines a broad range of themes including ethics, civic engagement, the history of public service in the United States and contemporary public policy concerns. Offered in the fall. *McLean.*

## PHIL 302: Leadership Ethics

(1 Unit)
Examines the ethical foundations of leadership. Involves an in-depth discussion of foremost leadership theories and their applications to different contexts; critically examines the morally distinct aspects of leadership by looking at the relationships among power, self-interest, and morality; and analyzes leadership from within the ethical frameworks of virtue, duty, and utility along with discussing the ethical challenges of diversity (culture relativism, race, and gender) to traditional leadership ethics. *Madhok.*

## PHIL 304: Ethics and Public Policy

(1 Unit)
Emphasizes the ethical foundations of public policy. Rights, obligations, justice, autonomy, the nature of the good life: should these play a role in determining public policy, and if so, how? Focuses on the interaction between ethical values and public policy in areas such as health care, law, government, foreign policy, citizenship, education and media. *Madhok.*

## PSYC 210: Educational Psychology

(1 Unit)
Prerequisite: PSYC 101 or Education 101.
Educational psychologists develop and apply theories of teaching, learning, and human development to determine the most effective ways for educators to teach students. Ideas about human learning and development impact many teaching activities, including lesson planning, structuring exercises, and diagnosing learning difficulties. Students will discuss how educational psychologists have studied and contributed to educational approaches worldwide including instructional design, educational technology, curriculum development for different content areas, classroom organizational learning, special education and classroom management. This course advances students' understanding of what constitutes typical learning and development, and the mechanisms that influence learning in educational settings across the globe. *Francis.*

## PSYC 346: Industrial and Organizational Psychology

(1 Unit)
Prerequisites: PSYC 101 or E&M 101 and PSYC 204 or E&M 200, or permission of instructor.
Focuses on personnel selection, evaluation and employee training and development. Emphasizes criterion development, motivation, job satisfaction, leadership and conflict resolution in industrial and organizational settings. *Christopher, Staff.*

Diversity in Human Services

## ANTH 256: Native North America

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or ETHN 103 or permission of instructor.
The historical and anthropological study of Native peoples of North America, with an emphasis on the twentieth century. Topics include federal policy, political movements, gender, the construction of identities and relationships between scholars and Native communities. Same as HIST 256. *Staff.*

## COMM 213: Intercultural Communication

(1 Unit)
An exploration of the role communication plays in defining and sustaining culture both globally and locally. By applying current research and theories in intercultural communication, students are introduced to major topics pertaining to communication between cultures. Topics include, but are not limited to: the way a culture's deep meaning structure impacts the way people communicate, culture-specific verbal and nonverbal norms, advice on verbal and nonverbal behavior when doing business internationally, adjusting to culture shock and exploring various subcultures in the United States. *Erlandson.*

## COMM 207: Communicating Gender

(1 Unit)
An exploration of the ways in which gender and communication interact. Students are introduced to research in the field and observe and analyze the ways in which our cultural construction of gender impacts on how we communicate and judge the communication of others. *Erlandson, Staff.*

## HIST 243: African American History, 1865 to the Present

(1 Unit)
A history of black people in the United States from the end of the Civil War to the present. Stress on the rise and fall of Reconstruction, Jim Crow, black migration to the cities, the Harlem Renaissance, the civil rights movement and contemporary issues in race relations. *Sacks.*

## ETHN 103: Introduction to Ethnic Studies

(1 Unit)
An introduction to the comparative study of ethnicity, as well as the history and culture of particular ethnic groups in America. Issues--ethnic identity, ethnocentrism, discrimination, assimilation and multiculturalism--are analyzed from a variety of disciplines in the humanities, social sciences and the arts. Serves as the introductory course for the ethnic studies concentration. *Staff.*

## PHIL 201: Ethics

(1 Unit)
An examination and evaluation of the major ethical theories, both classical and contemporary, and the application of these theories to a current moral problem. *Madhok.*

## PHIL 202: Social Philosophy

(1 Unit)
An issues and historically oriented introduction to a broad range of philosophical subject matter and methodologies through a clarification and analysis of argumentation used to justify selected social and political institutions and practices—e.g., individual liberties, properties of personhood, the nature of the state, obligations and rights, etc. *Staff.*

## PHIL 206: Contemporary Moral Problems

(1 Unit)
An introduction to a broad range of philosophical subjects and methodologies through an examination and analysis of contemporary moral problems—e.g., abortion, euthanasia, genetic engineering, sexual morality, gender and racial discrimination, corporate crime, pornography and censorship, the death penalty, ecology, world hunger, etc. *Madhok.*

## RS 242: Christian Ethics

(1 Unit)
An introduction to the foundations and applications of Christian theological ethics. Investigates Christian perspectives on moral issues such as sex and marriage, medical ethics and social justice. *Mourad.*

## RS 270: Liberation Theology

(1 Unit)
Examines Christian theological responses to poverty and social injustice emphasizing the theme of liberation. Includes analysis of liberation theology in 1960s Latin America and its influence on African American and feminist theologies in the U.S. Offered occasionally. *Mourad.*

## SOC 333: The Sociology of Sex and Gender

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or WGS 111, or permission of instructor.
Examines the social construction and social consequences of gender difference and gender inequality with a specific focus on the United States. Gender theory and research will be used to explore masculinity and femininity as identities, as behavioral expectations and as organizing features of social life. Covers belief systems; broad social institutions such as family, employment, media and health; experiences of sexuality and violence; and individual behavior such as personal styles and modes of interacting with others. Focuses on how gender as an organizing feature of social life benefits some and is disadvantageous to others, paying special attention to how race, ethnicity, class and sexuality intersect with gender. Gender theory and research will be used to explore masculinity and femininity as identities, as behavioral expectations and as organizing features of social life. *Melzer.*

## SOC 345: Race and Ethnicity

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or ETHN 103 or permission of instructor.
Alternative theories of racial and ethnic relations, and their application to groups within the United States. Particular attention will be focused on the reasons for ethnic conflict and strategies for conflict resolution. *Verduzco-Baker.*

## SOC 370: Social Mobility and Inequity

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 and junior standing or permission of instructor.
An examination of the changing patterns of social stratification within the U.S. since World War II. Topics include

income and wealth inequality, education and social mobility, the reorganization of the workplace, poverty and social welfare. *Verduzco-Baker.*

### WGS 111: Introduction to Women, Gender and Sexuality

(1 Unit)
The goal of this interdisciplinary course is to introduce students to the fields of women's, gender, and sexuality studies. Students will learn core concepts and historical and current theories that analyze women's positions, gender realities and sexual identities and cultures. This course also has a particular focus on social construction of differences and how these central issues interact with race, class, ethnicity, culture, age and abilities. Each semester students will explore four topics in depth: intersectional identities, violence, public policy and economics/work. They will also apply WGS analyses to current events and the media. *Staff*

- Students must take a minimum of two units of supplemental courses that add depth to the internship experience. Typically, these two courses will come from the lists above. students should select courses that complement and amplify a student's special interests, especially in relation to their internship. Other courses not on the list above may be approved by the director of the human services concentration if the student provides ample justification.
- All students must complete a one-unit practicum internship approved by the human services director. This requirement may be satisfied by either the psychology practicum or an appropriate internship that is arranged through the student's major department. The following represent possible internship sponsors: private social agencies, family-related agencies, public health offices, community health centers, institutions serving children and teenagers, churches and church-related institutions, crisis intervention agencies, state and local governments, and community organizations.
- For more information, contact the director of the concentration.

# Interdepartmental Majors

Course work and faculty for the following majors are drawn from two different departments. Students with specific questions regarding these majors should contact the registrar for further information.

# Mathematics/Economics, Interdepartmental B.A.

The interdepartmental major in mathematics/economics is intended for those students who wish to combine these two areas of study but do not want to limit their course work in other liberal arts areas by having to take all of the classes necessary for completion of the two majors. Students interested in economics can learn the mathematical approach to this discipline, while students interested in mathematics will learn the importance of mathematics as a theoretical and empirical tool for solving economic and business problems. Students with this interdepartmental major will be well prepared to enter a career in business consulting or to enroll in graduate programs in economics, business, operations research or applied mathematics.

## Requirements for Major

- Each department may waive one or more of its own courses for students with advanced high school preparation.
- All courses for the mathematics/economics major must be taken for a numerical grade.
- Mathematics/economics majors are expected to attend all colloquia of the Mathematics and Computer Science Department.
- This major is not intended to lead to secondary teacher certification; however, a student may combine this major with a certification major in mathematics.

- This major is not open to those who have a major in mathematics or economics.
- A student satisfies the requirement for the mathematics/economics major by successfully completing the following twelve courses:

## Economics and Management:

### E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

### E&M 102: The Economy and Financial Markets

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the macroeconomy and macroeconomic models with special emphasis on the role of financial markets, interest rates, the Federal Reserve, monetary and fiscal policy, and money and capital markets. *Hooks, Li.*

### E&M 209: Intermediate Microeconomics with Calculus

(1 Unit)
Prerequisite: E&M 101 and MATH 141 or permission of instructor.
A more rigorous version of E&M 201 for students pursuing the mathematics/economics major and for others with the necessary math background by permission. Not offered every year. *Jaqua.*

### E&M 202: Intermediate Macroeconomics

(1 Unit)
Prerequisites: E&M 101; E&M 102; and MATH 120 ro demonstrated proficiency, MATH 125, or MATH 141.
The development of macroeconomic theory and its application to government policy toward unemployment, inflation and growth. *Hooks, Li.*

### E&M 300: Econometrics

(1 Unit)
Prerequisite: One of the following: MATH 209, MATH 309, or E&M 200.
An introduction to empirical work in economics and management. Topics covered include: hypothesis testing, estimation, correlation, and regression and related problems. Students use statistical software to access data sources and to write an empirical paper. Topics covered include: hypothesis Not offered every year. *Jaqua.*

### E&M 309: Mathematical Economics

(1 Unit)
Prerequisites: E&M 201and at least one course in calculus.
Optimization and economic analysis, game theory and financial economics. Not offered every year. *Jaqua.*

# Mathematics:

## MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 239: Discrete Structures

(1 Unit)
Prerequisite: MATH 141.
A survey of discrete mathematics with topics selected from set theory, functions and relations, number theory, combinatorics, graph theory, logic (predicate calculus, quantifiers), introduction to proof techniques, and probability. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Kamischke.*

## MATH 245: Multivariate Calculus

(1 Unit)
Prerequisite: MATH 143.
Vectors, inner and cross products, and vector-valued functions including parametric represetations of curves and surfaces in space. Partial differentiation, the chain rule, function gradients, implicit differentiation, multivariate optimization, Lagrange multipliers, multiple integrals and vector analysis, including divergence and curl of vector fields, as well as the theorems of Green, Stokes and Gauss. *Mason.*

## MATH 247: Differential Equations and Linear Algebra

(1 Unit)
Prerequisite: MATH 245.
First-order differential equations and numerical algorithms of Euler and Runge-Kutta. Linear algebraic systems, Gaussian elimination, row-echelon form matrix algebra, inverses and determinants. Vector spaces, subspaces, linear

independence, bases, span, dimension, linear mappings and function spaces. Second and higher-order linear differential equations. Eigenvectors, eigenvalues and spectral decomposition methods. First-order linear differential systems, including solutions methods using matrix exponentials. Applications focus on problems in physics, chemistry, biology, economics and engineering. Additional topics may include nonlinear dynamical systems, stability theory, transform theory and power series solutions. *Mason.*

### MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

## One Course from the Following:

### MATH 326: Operations Research

(1 Unit)
Prerequisites: MATH 247.
An introduction to computational methods in mathematical modeling including linear programming and Markov chains. Applications in business, economics and systems engineering. Knowledge of probability is helpful. Offered in alternate years. Same as CS 326. *Mason.*

### MATH 331: Real Analysis

(1 Unit)
Prerequisites: MATH 245 and MATH 239.
A study of the concepts underlying calculus of a single variable: The completeness property of the real number system, convergence, continuity, properties of elementary functions, the derivative and the Riemann integral. *Bollman.*

### MATH 360: Mathematical Modeling

(1 Unit)
Prerequisites: MATH 247 and CS 171.
An introduction to analytical methods in mathematical modeling, including nonlinear optimization, dynamical systems and random processes. Applications in physics, biology, economics and systems engineering. Knowledge of probability and statistics is helpful. Same as CS 360. *Mason.*

# Mathematics/Physics, Interdepartmental B.A.

The interdepartmental major in mathematics/physics is intended for those students who wish to combine these two areas of study, but do not want to major in one at the expense of the other or be limited by the concentration of courses in two departments necessary for a double major. The student with this major could enter a career in computer science or would be well prepared to enter a program in applied mathematics or mathematical physics.

## Requirements for Major

- The major is not intended to lead to secondary teacher certification and is not open to those who have a major in both mathematics and physics. However, a student may combine this major with a certification major in either mathematics or physics.
- All courses for the mathematics/physics major must be taken for a numerical grade.
- Mathematics/physics majors are expected to attend all colloquia of the Mathematics and Computer Science Department and the Physics Department.
- A student satisfies the minimum requirements by doing all of the following:

## Completing Successfully:

### PHYS 167: Analytical Physics I

(1 Unit)
Corequisite: MATH 141, or permission of instructor.
First semester of a calculus-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

### PHYS 168: Analytical Physics II

(1 Unit)
Prerequisite: PHYS 167. Corequisite: MATH 143 or permission of instructor.
Second semester of a calculus-based survey of general physics. Topics include electricity and magnetism, light and optics, and select topics in modern physics. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

### PHYS 243: Introduction to Mathematical Methods in Physics I

(.5 Unit)
Prerequisite: PHYS 168, or permission of instructor.
An introduction to the mathematical methods in Physics. Topics include statistical interpretation of data and distribution functions, functions of a complex variable, and Fourier analysis. *Staff.*

### PHYS 244: Introduction to Mathematical Methods in Physics II

(.5 Unit)
Prerequisites: PHYS 168 and PHYS 243, or permission of instructor.
A continuation of PHYS 243. Topics include Coordinate transformations and curvilinear coordinates, partial differential equations, matrices and linear algebra. *Staff*

### PHYS 250: Introductory Modern Physics

(1 Unit)
Prerequisites: MATH 245 and PHYS 243, or permission of instructor. Corequisites: PHYS 244 and MATH 247, or permission of instructor (may also be taken as prerequisites).
A survey of modern physics. Topics include special relativity, the quantum theory of light and quantum mechanics of matter with applications in atomic, nuclear and elementary particle physics. *Staff.*

### PHYS 325: Theoretical Mechanics

(1 Unit)
Prerequisites: PHYS 244, MATH 247.
Review of elementary mechanics, one-dimensional motion, harmonic oscillator, motion in two and three dimensions, central force motion and orbital mechanics, many-particle systems, rotational motion, gravitation, moving coordinate systems and Lagrangian mechanics. *Zellner.*

### PHYS 336: Electricity and Magnetism

(1 Unit)
Prerequisites: PHYS 244, MATH 247.
A thorough discussion of Maxwell's electromagnetic field equations in differential form. Major topics are electrostatics, magnetostatics, electromagnetic induction and electromagnetic waves. *Moreau.*

## Completing Successfully:

The Mathematics and Computer Science Department may waive one or more of these courses for students with advanced high school preparation.

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### MATH 245: Multivariate Calculus

(1 Unit)
Prerequisite: MATH 143.
Vectors, inner and cross products, and vector-valued functions including parametric represetations of curves and surfaces in space. Partial differentiation, the chain rule, function gradients, implicit differentiation, multivariate optimization, Lagrange multipliers, multiple integrals and vector analysis, including divergence and curl of vector fields, as well as the theorems of Green, Stokes and Gauss. *Mason.*

### MATH 247: Differential Equations and Linear Algebra

(1 Unit)
Prerequisite: MATH 245.
First-order differential equations and numerical algorithms of Euler and Runge-Kutta. Linear algebraic systems, Gaussian elimination, row-echelon form matrix algebra, inverses and determinants. Vector spaces, subspaces, linear independence, bases, span, dimension, linear mappings and function spaces. Second and higher-order linear differential equations. Eigenvectors, eigenvalues and spectral decomposition methods. First-order linear differential systems, including solutions methods using matrix exponentials. Applications focus on problems in physics, chemistry, biology, economics and engineering. Additional topics may include nonlinear dynamical systems, stability theory, transform theory and power series solutions. *Mason.*

## Completing Successfully:

### MATH 380: Mathematical Physics

(1 Unit)
Same as PHYS 380. *Staff.*

### PHYS 380: Mathematical Physics

(1 Unit)
Prerequisites: MATH 247, or permission of instructor.
Mathematical methods in physics including vector calculus, transform calculus, tensor analysis and special functions (viz. Fourier series, Gamma functions, Hermite polynomials, Bessel functions, spherical harmonics and Laguerre polynomials). Same as MATH 380. *Staff.*

a joint offering of the two departments

# Interdisciplinary Majors/Minors

Course work and faculty for the following majors are drawn from several different departments. Students with specific questions regarding these majors should contact the respective program director or the registrar for further information.

# Ethnic Studies

Information on the ethnic studies major is given under that heading in the departmental listings.

# Social Studies

Information on the social studies major with elementary or secondary education certification is given under the Education Department.

# International Studies

Information on the international studies major is given under that heading in the departmental listings.

# Public Policy

Information on the public policy major is given under that heading in the departmental listings.

# Women's and Gender Studies

Information on the women's and gender studies major is given under that heading in the departmental listings.

# Data Analytics Minor

The data analytics minor is designed for students who want to develop or enhance their ability to apply statistics, programming/coding, and mathematics to assess, analyze, and communicate recommendations related to complex data-driven problems in their area of interest. The minor can be coupled with nearly any major on campus. Five units are required including: core classes in statistics, and computer programming, one survey course on data analytics, and two electives within four different areas of emphasis related to data: management/organization, research methods & analysis, modeling & forecasting, and data & society. A maximum of two classes from this minor may also be counted towards a college major. For questions about this minor, contact Dr. Drew Ash in Mathematics or Dr. Seolah Kim in Economics & Management.

**Student Learning Outcomes for Minor:**

All students completing this minor will be able to:

1. Collect, explore, and clean a dataset related to a question of interest with a comprehension of several data formats.
2. Conduct data visualizations and basic data analyses from the real-world data across different basic and applied contexts.
3. Recognize societal concerns associated with data collection and analysis, such as ethical issues of implicit biases, privacy, confidentiality.
4. Be proficient in at least one high-level programming language and know how to apply this language to real-world datasets.
5. Interpret the results from the analyses and clearly present them in a professional manner.

## Requirements for Data Analytics Minor

## Foundation Courses

### DA 101: Intro to Data Analytics

(1 Unit)
An introduction to the foundations of data science, including analysis and representation. Topics will include data collection and cleaning, programming languages, basic statistics, data visualization, ethical concerns, and applications of data science in a variety of career fields. *Staff*

### E&M 200: Economic Statistics

(1 Unit)
Prerequisite: Math 120 or demonstrated proficiency, MATH 125, or MATH 141.

A first course in statistics with emphasis on regression analysis and its applications in economics and management. Not open to students who have taken MATH 209 or MATH 309. *Jaqua.*

OR

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

### CS 151: Information Technology

(1 Unit)
Intended for the liberal arts student who wants to understand and better use information technology. Topics include how computers work, the Internet and World Wide Web, new trends in computing such as mobile computing and peer-to-peer networks, how software development differs from traditional manufacturing, how computing is changing our culture and laws, current trends in computer crime, security, and privacy. Additional topics are drawn from current events and issues. Does not count toward the computer science major or minor. Laboratory. Does not count toward the computer science major or minor. *Staff.*

OR

### CS 171: Introduction to Computer Science I

(1 Unit)
Prerequisite: MATH 125 (or equivalent) or permission of instructor.
Designed to be the first computer science course taken by students in mathematics and computer science. Topics include fundamentals of computation and algorithmic problem-solving, data types, control structures, the object-oriented programming paradigm and applications. Introduces a high-level programming language such as Java or Python. *Reimann.*

## Elective Courses:

Two additional units from the following areas of emphasis, with at least two from the same area.

## Data Organization & Management

### CS 173: Introduction to Computer Science II

(1 Unit)
Prerequisite: CS 171.
A continuation of CS 171. Emphasizes advanced object-oriented programming (interfaces, multiple inheritance, reflections), abstract data types (stacks, queues, lists, strings, trees, graphics, etc.) and analysis of algorithms. Other topics include recursion, searching and sorting, simulation and an introduction to some of the advanced areas of computer science, e.g., computer organization, artificial intelligence and user interfaces. Students refine their programming skills in a high-level programming language such as Java or Python. Laboratory. *Reimann.*

### CS 265: Database Programming

(1 Unit)
Prerequisites: CS 173 and MATH 239.
Fundamental concepts of database management systems: the relational data model, relational algebra, and normal forms, file organization and index structures, and the query language SQL and embedded SQL. Offered every third year. *Reimann, Staff.*

### GEOL 111: Geography and Geographic Information Systems

(1 Unit)
An introduction to the elementary principles, techniques and utility of geographic information systems (GIS) toward the study of world geography, as well as related concepts and techniques involved in creating and using digital maps. Shows how maps (particularly computer-generated maps) can help in displaying and analyzing geographic and other spatial data, and the use of these analyses in modeling cultural and natural systems. Some prior computer experience is helpful, but is not required. Lecture and laboratory. *McRivette.*

## Data Analysis & Modeling

### E&M 300: Econometrics

(1 Unit)
Prerequisite: One of the following: MATH 209, MATH 309, or E&M 200.
An introduction to empirical work in economics and management. Topics covered include: hypothesis testing, estimation, correlation, and regression and related problems. Students use statistical software to access data sources and to write an empirical paper. Topics covered include: hypothesis Not offered every year. *Jaqua.*

### GEOL 302: Ground Water

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
A description of the hydrologic cycle with emphasis on quantifying water budgets and water flow in the shallow earth. Field techniques include stream gauging and well installation, surveying and slug testing. Analytical and numerical models are used to interpret pump test data and to understand water flow to pumping wells and the dispersal and remediation of contamination. Offered in alternate years. *Staff*

### GEOL 205: Sedimentation and Stratigraphy

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
An examination of the processes and principles that control the accumulation and lithification of sediments, based on examples of recent environments and ancient rock sections in many parts of the world. Laboratory emphasizes map-reading skills and methods for studying recent and ancient sediments and rocks. Offered in alternate years. *Bartels.*

### GEOL 208: Geomorphology

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
Geologic processes operating at the earth's surface and the landforms they produce. Includes the study of soil formation, river processes, glaciers, wave action, wind, groundwater and their related landforms. Field trips. Laboratory

includes analysis of aerial photographs, topographic maps and experiments with flume and wave tank. Offered in alternate years. *Wilch.*

### MATH 311: Regression and Time Series Models

(1 Unit)
Covers two topics in detail: multiple linear regression analysis and time series analysis. Inherent to both topics: parsimonious linear models, parameter estimation, diagnostic checking, and forecasting. Uses the matrix approach for multiple linear regression, and the Box-Jenkins methodology for constructing autoregressive-integrated moving average (ARIMA) models for time series analysis. Employs the statistical package MINITAB for analyzing all real-world data sets. *Anderson.*

## Data Research Methods w/Applications

### BIOL 225: Invertebrate Zoology

(1 Unit)
Prerequisite: BIOL 195.
Field-oriented course emphasizing evolution, classification, ecology, behavior and natural history of invertebrate animals. Class involves field trips and use of the Whitehouse Nature Center. Lecture and laboratory. *Cahill.*

### BIOL 360: Genomic Analysis

(1 Unit)
Prerequisite:  BIOL 300  or permission of instructor.
*Saville*

### CHEM 206: Chemical Analysis

(1 Unit)
Prerequisites: CHEM 152  or CHEM 154 .
Laboratory course emphasizing the collection, analysis and interpretation of quantitative data, using both traditional and instrumental techniques. *Bieler, Lewis, Metz.*

### E&M 325: Data-Driven Digital Marketing

(1 Unit)
E&M 220; E&M 200 OR MATH 209 OR MATH 309 OR BOTH PSYC 204 & 206
Overview of the rapidly changing field of digital marketing. Use of "big data" and machine learning to improve the effectiveness of digital marketing campaigns. Not offered every year. *Yayla*

### GEOL 311: Advanced Geographic Information Systems

(1 Unit)
Prerequisite: GEOL 111 or permission of instructor.
The study of the more advanced capabilities of Geographic Information Systems (GIS). Emphasizes spatial modeling and analysis using GIS software such as ArcView GIS. Topics include map algebra, point pattern analysis, network analysis, grid analysis and 3-D surface analysis. Students learn how to use these and other GIS tools for decision-making, model building and the effective use of maps. Lecture and laboratory. Offered in alternate years. *McRivette.*

### PHYS 167: Analytical Physics I

(1 Unit)
Corequisite: MATH 141, or permission of instructor.
First semester of a calculus-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

### PHYS 168: Analytical Physics II

(1 Unit)
Prerequisite: PHYS 167. Corequisite: MATH 143 or permission of instructor.
Second semester of a calculus-based survey of general physics. Topics include electricity and magnetism, light and optics, and select topics in modern physics. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

### PSYC 204: Research Methods and Statistics I

(1 Unit)
Prerequisites: PSYC 101 with a grade of 2.0 or higher and a 200-level lecture-based course, or permission of instructor.
An introduction to the theory and practice of research methods in psychology with an emphasis on descriptive designs. Focuses on naturalistic, archival, and survey methodology with discussion of descriptive statistics, probability, Chi-square, z-scores, correlation, and multiple regression. Lecture and laboratory. Course normally taken during second year. *Christopher, Elischberger, Francis, Hill, Jechura, Wieth, Staff.*

### PSYC 306: Research Methods and Statistics II

(1 Unit)
Prerequisite: PSYC 204 with a grade of 2.0 or higher, or permission of instructor.
Further exploration of the theory and practice of research methods in psychology with an emphasis on experimental designs. Focuses on both simple and complex designs with discussion of z-test, t-test, ANOVA (one-way, repeated measures and factorial), and MANOVA. Lecture and laboratory. Course normally taken during second year. *Christopher, Elischberger, Hill, Jechura, Wieth, Staff.*

### SOC 324: Quantitative Social Research

(1 Unit)
Prerequisite: SOC 101 and junior standing, or permission of instructor.
An overview of quantitative social research methods and statistics. Topics include problem formulation and connection between theories and research; research designs, measurement and sampling techniques; ethical issues in research; data processing and data analysis with discussion of descriptive statistics; hypothesis testing and chi-square tests of significance; correlation; and multiple regression models. Students design and carry out their own independent research projects in addition to an extensive application of SPSS in laboratory assignments using secondary data. *Staff.*

## Data & Society

### BIOL 365: Environmental Microbiology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.

Microbes in action: bioremediation, biodegradation, cycling of nutrients and energy flow, biopesticides and phytopathogens, spread of antibiotic resistance, molecular ecology of infectious diseases, microbial symbionts and extremophiles. Explores these and other topics through discussions, field trips and experimental work. Lecture and laboratory. Offered in alternate years. *Olapade.*

### CS 261: Computers, the User and Society

(1 Unit)
Prerequisite: CS 171.
An examination of how computers are used and how computers fit into society. Topics include user interface design, human-centered software development and evaluation, software reliability, social context of computers, professional and ethical responsibilities for technology professionals, intellectual property rights, privacy and civil liberties, computer crime. Offered every third year. Offered every third year. *Reimann, Staff.*

### GEOL 104: Earth Resources and the Environment

(1 Unit)
Without earth resources, civilization would not exist. Gold, diamonds, water, oil, building materials—all of our material resources ultimately are derived from the earth. This course examines the origin and geologic occurrence of these materials and the environmental implications of their utilization. No laboratory. *Staff.*

### GEOL 106: Natural Disasters

(1 Unit)
A review of the natural disasters that affect humans and the environment. Emphasizes the causes and prediction of natural hazards, assessment of hazard vulnerability, and disaster mitigation and recovery through case studies of historical and recent natural disasters. Topics include earthquakes, volcanoes, landslides, extreme weather, climate change and floods. No laboratory. *Staff.*

### PHIL 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*
Data Science & Ethics

# International Studies

# Faculty

**Bindu Madhok**, program chair and professor of philosophy.
B.A., University of Calcutta; Ph.D., Brown University. Appointed 1990.

**Midori Yoshii**, professor of international studies.
B.A., M.A., Tsuda College Tokyo; M.A., Ph.D., Boston University. Appointed 2004.

# Introduction

International studies is a multidisciplinary and interdisciplinary program that encourages students to examine cross-cultural, cross-national or transnational phenomena. It seeks therefore both a depth and breadth of knowledge about the human experience. Its primary justification arises from the belief that the world is increasingly interdependent and that many of the challenges to humanity are global in scope and cannot be usefully studied within the confines of a single discipline.

Students completing the international studies major at Albion College will have acquired a solid grasp of social, political, economic and historical forces at work in the world; competence in a second language equivalent to four semesters of college-level work; a familiarity with methodologies appropriate to the study of international phenomena; and a globally relevant experience through an appropriate off-campus program. For further information, contact Midori Yoshii, adviser.

International Studies Website

# Student Learning Outcomes

Student Learning Outcomes for the IS Major:

1. Students will be able to analyze international issues.

2. Students will be able to explain the similarities and differences between their own cultures/societies and those of people in other countries.

3. Students will be able to demonstrate interactive skills with people of different cultural backgrounds and spoken languages.

4. Students will be able to synthesize their in-depth understanding of international issues through independent research projects.

Student Learning Outcomes for the IS Minor in Area Studies:

1. Students will be able to analyze social, political, economic, and historical forces at work in a specific geographical region or country.

2. Students will be able to explain the similarities and differences between their own cultures/ societies and those of people in other countries.

3. Students will be able to demonstrate interactive skills with people of different cultural backgrounds and spoken languages.

Student Learning Outcomes for the IS Minor in Transnational Studies:

1. Students will be able to analyze how relationships among governments, regions, and countries impact our contemporary world.

2. Students will be able to explain the similarities and differences between their own cultures/ societies and those of people in other countries.

3. Students will be able to demonstrate interactive skills with people of different cultural backgrounds and spoken languages.

# Area Studies Minor

## Requirements for Minor in Area Studies

- Five units as follows: INTN 130, plus four courses on a specified geographical region (Europe, Africa, Asia or Latin America). Depending on course availability, students may pursue other area studies tracks with the prior approval of the International Studies Program Committee. Area studies courses shall be distributed across at least two departments, with at least three courses at the 200-level or higher.
- All courses must be taken for a numerical grade, except those offered only on a credit/no credit basis.
- No more than two transfer credits will be accepted.
- Cognate requirements: Knowledge of a second language, equivalent to at least two years of college-level study (students may fulfill through course work or placement test). The language must be a language of the region under study.

# International Studies, B.A.

## Requirements for Major

A minimum of eight units as follows:

Three international studies core courses consisting of INTN 130 and two additional courses, one of which must be at the 200-level or higher. The two additional international studies core courses must be taken in two different departments. A current list of pre-approved IS core courses is available on the International Studies Program Web site or from the International Studies Program Committee chair.

**International Studies Core Courses:**

ANTH 105 : Introduction to Anthropology

ANTH 238 : South Asian Indentities

ANTH 279 : Global Health

ANTH 365 : Archeology of Empire

ANTH 371: The Global Politics of Nature

ARTH 116 : World Art

BIOL 240 : Conservation Biology

COMM 213 : Intercultural Communication

E&M 362 : International Management

E&M 365 : International Finance

E&M 366 : International Trade

FREN 314 : Multicultural France

GERM 314 :  Multiculturalism In Germany

GERM 389: 20th Century Global Transformations through German Film

GEOL 111 : Geography and GIS

HIST 142 : Modern Latin American History

HIST 270 : Latin American Immigration and the U.S.

HIST 300 : Slave Societies of the Americas

HIST 309 : Pax Britannica (British Empire)

HIST 371 : Latin-American- U.S. Relations

HIST 385: British India

HSP 151: Great Issues in Social Science: U.S. Foreign Policy Since 1945

INTN/HIST 260 : An International History of the Cold War

INTN/HIST 264 : An International History of Japan

INTN/HIST 310 : Power and Culture in the Asia-Pacific

MLAC 105: Intercultural Understanding

PHIL 309 : International Ethics and Global Development

PLSC 206: Transitions to Democracy

PLSC 207 : Trnasnational Justice

PLSC 256 : Human Rights in the Modern World

PLSC 301 : International Organizations

PLSC 336 : International Relations

PLSC 357 : International Law and Politics

PLSC 372 : Gender, Sex, and International Politics

RS 261 : Death and Dying

SOC 235 : Global Transformation

SOC 247 : Sociology of Terrrorism

SOC 280 : Children of Immigrants

SOC 328 : Global Urbanism

WGS 111 : Intro to Women's/Gender/Secuality Studies

Elective courses constituting a curricular focus. Electives must be taken in at least two different departments. A list of sample elective courses is available on the International Studies Program Web site or from the International Studies Program Committee chair. The number of courses that a student takes depends on the track chosen and the number of

units elected for the capstone project. Students may choose from the following options:

**Area Studies**--At least three units of course work in one of the following areas: Europe, Africa, Asia or Latin America. Depending on course availability, students may pursue other area studies tracks with the prior approval of the International Studies Program Committee. Modern language competence must be in a language related to the area studies focus. The semester abroad must be in a location related to the area studies focus.

**Transnational Studies**--At least four units of course work on a specific transnational topic. Pre-approved tracks include international environmental studies and international gender studies. Depending on course availability, students may pursue other transnational studies tracks with the prior approval of the International Studies Program Committee.

INTN 370: Building on International and Intercultural Experiences

### Additional Major Requirements

- Course work must include at least two courses taken at the 300-level or higher. No more than three units of 100-level work may be counted toward the major.
- Up to three units of course work may be taken abroad.
- Proof of modern language competence equivalent to two years of college-level language study is required.
- At least one semester abroad must be completed in an off-campus study program approved for Albion College credit. In special circumstances, students may petition the International Studies Program Committee to fulfill this requirement through U.S.-based off-campus study programs with significant international content.

# Transnational Studies Minor

### Requirements for Minor in Transnational Studies

- Five units as follows: INTN 130, plus four international studies core courses, of which three must be at the 200-level or above. These must also be distributed across at least two departments.
- All courses must be taken for a numerical grade, except those offered only on a credit/no credit basis.
- No more than two transfer credits will be accepted.
- Cognate requirements: Knowledge of a second language, equivalent to at least two years of college-level study (students may fulfill through course work or placement test).

# Kinesiology

# Faculty

**Heather H. Betz**, associate professor.
B.A., Saint Mary's College of California; M.A., San Francisco State University; Ph.D., Michigan State University. Appointed 2011.

**Julie M. Cousins**, chair and associate professor.
B.S., Winona State University; Ph.D., University of Minnesota. Appointed 2017.

**Ahalee C. Farrow**, assistant professor.
B.S., Texas Tech University; M.S., Texas Tech University; Ph.D., Texas Tech University. Appointed 2022.

**Amy Gyorkos**, assistant professor.
B.S., Central Michigan University; M.S., Ph.D., Western Michigan University. Appointed 2020.

**Holly M. Hil**l, visiting instructor.
B.A., Hope College; M.A., Western Michigan University. Appointed 2014.

**Chris Tomczyk**, visiting instructor.
B.S., West Chester University of Pennsylvania; M.S., Georgia Southern University.; Ph.D. (ABD), Michigan State University. Appointed 2022.

# Introduction

The Kinesiology Department provides students with the skills and abilities to work in a variety of areas related to health and wellness. The Exercise Science major is one of the fastest growing majors at Albion College. It provides students with the knowledge of how the human body works, and how it reacts and adapts to exercise. Students are taught how to assess and improve fitness, human performance, and health by applying basic science to these areas in a variety of courses and experiences.

Kinesiology Department Website

# Career Opportunities

Job opportunities for Exercise Science majors leaving Albion College include working as personal trainers, strength and conditioning coaches, and in cardiac rehabilitation facilities. Students who complete a degree in Exercise Science are able to sit for certifications by the American College of Sports Medicine and the National Strength and Conditioning Association. Graduates of the program frequently attend graduate or professional schools. Our graduates go onto careers as physical therapists, occupational therapists, athletic trainers, physician assistants, chiropractors, nurses, dieticians, clinical exercise physiologists, and physicians.

# Student Learning Outcomes (KIN Major)

1. Students will be able to integrate the knowledge from the foundational disciplines of Kinesiology.
2. Students will be able to demonstrate skills in information/scientific literacy.
3. Students will be able to demonstrate effective oral and written communication skills.
4. Students will be able to think critically and formulate appropriate questions/ideas in order to address open-ended problems.
5. Students will apply knowledge of Kinesiology in a real world setting.

# Student Learning Outcomes (KIN Minor)

1. Students will be able to demonstrate skills in information/scientific literacy.
2. Students will be able to demonstrate effective oral and written communication skills.
3. Students will be able to think critically and formulate appropriate questions/ideas in order to address open-ended problems.

# Student Learning Outcomes (Public Health Concentration)

1. Students will be able to describe epidemiological processes.
2. Students will be able to interpret basic statistical information and specifically public health data.
3. Students will be able to describe how the determinants of health (social, economic, biological, behavior, organizational, and environmental) affect the health of different populations.
4. Students will be able to identify and describe the major issues in public health and the most pressing health concerns for US populations.
5. Students will be able to demonstrate effective written communication skills.

# Exercise Science Minor

## Requirements for Minor in Exercise Science

- All courses for the minor must be taken for a numerical grade, except those offered only on a credit/no credit basis.

## Five Units, Including:

### KIN 230: Human Systems Anatomy

(1 Unit)
This course is a study of the anatomical structure of the human body, from microscopic to gross structures across the organ systems. Of particular importance is: (1) the complementarity of human anatomy structure and function, (2) the interrelationships between organ systems, and (3) the application of anatomical knowledge to common diseases and clinical conditions. *Betz*

### KIN 369: Human Physiology

(1 Unit)
Prerequisite: KIN 230.
This course focuses on the function of organs and organ systems and how they interact with each other to maintain

homeostasis. This course includes three 65-minute lectures and a two hour and twenty-minute lab per week. Lecture and Laboratory. *Betz, Cousins, Staff*

### KIN 379: Exercise Physiology

(1 Unit)
Prerequisite: KIN 369 or permission of instructor.
An examination of the mechanisms and processes by which the body performs its various functions. Emphasis on cardiovascular, respiratory, muscular and nervous systems as they relate to physical activity. This course includes three 65-minute lectures and a two hour and twenty-minute lab per week. Lecture and Laboratory. *Betz, Cousins, Staff.*

Plus 2 electives, one must be at the 300 level.

# Exercise Science, B.A.

## Requirements for Major in Exercise Science

- All courses for the major must be taken for a numerical grade, except those offered only on a credit/no credit basis.

## Ten Units Including:

### KIN 210: Nutrition

(1 unit)
This course will provide students with the foundation for an understanding of the basics of nutrition. The focus will be on the application of nutritional principles to a daily dietary practice and how food choices can enhance health and reduce the risk of chronic diseases. *Cousins, Yocum, Betz, Staff*

### KIN 230: Human Systems Anatomy

(1 Unit)
This course is a study of the anatomical structure of the human body, from microscopic to gross structures across the organ systems. Of particular importance is: (1) the complementarity of human anatomy structure and function, (2) the interrelationships between organ systems, and (3) the application of anatomical knowledge to common diseases and clinical conditions. *Betz*

### KIN 233: Human Gross Anatomy

(1 Unit)
Prerequisite: KIN 230.
The basic musculoskeletal anatomical concepts related to the human body. Emphasizes applications to physical activity and musculoskeletal injury. Lecture and laboratory (cadaver). *R.Moss.*

### KIN 368: Biomechanics

(1 Unit)
Prerequisite: KIN 233.
Introduction to the study of biomechanics and its applications to human movement. This course emphasizes both quantitative and qualitative analyses of human movement using basic mechanical principles. *Yocum*

### KIN 369: Human Physiology

(1 Unit)
Prerequisite: KIN 230.
This course focuses on the function of organs and organ systems and how they interact with each other to maintain homeostasis. This course includes three 65-minute lectures and a two hour and twenty-minute lab per week. Lecture and Laboratory. *Betz, Cousins, Staff*

### KIN 379: Exercise Physiology

(1 Unit)
Prerequisite: KIN 369 or permission of instructor.
An examination of the mechanisms and processes by which the body performs its various functions. Emphasis on cardiovascular, respiratory, muscular and nervous systems as they relate to physical activity. This course includes three 65-minute lectures and a two hour and twenty-minute lab per week. Lecture and Laboratory. *Betz, Cousins, Staff.*

### KIN 381: Foundations of Exercise Testing and Prescription

(1 Unit)
Prerequisites: KIN 369
Provides the knowledge and tools to properly conduct various aspects of exercise testing such as the assessment of risk stratification, cardiorespiratory endurance, muscular strength and endurance, body composition and flexibility. Applies these assessments in development of exercise programs and prescriptions for both a general health and fitness population and a clinical population. Emphasizes the American College of Sports Medicine's guidelines for exercise testing and prescription with specific focus on the knowledge, skills and abilities for the Health Fitness Specialist Certification. *Betz, Cousins, Yocum, Staff.*

Three additional KIN Courses, two of which must be at the 300-level

# Public Health Concentration

The following are required for the public health concentration:

## Public Health Core:

### PH 175: Introduction to Public Health

(1 Unit)
This introductory course provides an overview of the field of public health and its key qualitative and quantitative methods. Students will examine the economic, cultural, and political factors leading to the uneven distribution of health and disease in the United States. Using the lens of structural violence, course materials will focus on how race, socioeconomic status, gender, age, and sexuality determine access to care, quality of care, and even definitions of disease. Special attention will be paid to racialized health practices in the United States. Students will consider the ways that science and technology can be coupled with social science to understand disease trends and improve human health outcomes. The course also examines the effectiveness of programming and education campaigns aimed at improving health. *Staff*

### PH 185: Colloquium in Public Health

(.25 Unit)
Prerequisite: HCI 175

Discussion of selected topics in ublic health. Using the lens of structural violence, course materials will focus on how race, socioeconomic status, gender, age, and sexuality determine access to care, quality of care, and even definitions of disease. Students read selected associated materials, attend presentations, and actively participate in discussions on matters related to public health. *Staff*

- An approved statistics course (1 Unit)
- A capstone experience, such as an internship, major research project, or substantial experiential learning program, as approved by the Wilson Institute for Medicine.

## Approved Statistics Courses Include:

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

### MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

### PSYC 204: Research Methods and Statistics I

(1 Unit)
Prerequisites: PSYC 101 with a grade of 2.0 or higher and a 200-level lecture-based course, or permission of instructor.
An introduction to the theory and practice of research methods in psychology with an emphasis on descriptive designs. Focuses on naturalistic, archival, and survey methodology with discussion of descriptive statistics, probability, Chi-square, z-scores, correlation, and multiple regression. Lecture and laboratory. Course normally taken during second year. *Christopher, Elischberger, Francis, Hill, Jechura, Wieth, Staff.*

### SOC 324: Quantitative Social Research

(1 Unit)
Prerequisite: SOC 101 and junior standing, or permission of instructor.
An overview of quantitative social research methods and statistics. Topics include problem formulation and connection between theories and research; research designs, measurement and sampling techniques; ethical issues in research; data processing and data analysis with discussion of descriptive statistics; hypothesis testing and chi-square tests of significance; correlation; and multiple regression models. Students design and carry out their own independent research projects in addition to an extensive application of SPSS in laboratory assignments using secondary data. *Staff.*

## Additional Approved Courses Include:

Four units, drawn from an approved list of courses, with at least one course from each area of emphasis. No more than two courses may count toward a student's major. Additional courses may count toward the concentration pending approval of the Wilson Institute for Medicine.

## Global and Community Health Emphasis

### ANTH 279: Global Health

(1 Unit)
ANTH 105 or SOC 101, or permission of instructor
This course explores the economic, cultural, and political factors leading to the uneven distribution of health and disease around the world. Students will learn about the global burden of various diseases -- acute and chronic, epidemiological transitions, and syndemics. Programming considerations and global health goals will also be considered. The course will draw from public health, epidemiology, (medical) anthropology, sociology, and economics. *Webb.*

### ANTH 368: Medical Anthropology

(1 Unit)
ANTH 105 and junior standing or permission of the instructor.
A survey of the cultural practices that contribute to understandings of health and disease. The course introduces students to a broad range of topics in medical anthropology, including examination of treatment therapies in Western and non-Western cultures. Students are encouraged to move beyond purely biological understandings of health and disease and consider how healing practices are embedded within social, cultural, economic, and political domains. This course will be of particular interest to premedical students and those interested in allied health professions. *Webb.*

### COMM 211: Risk Communication

(1 Unit)
This course is an introduction to risk communication, giving a communication research perspective to wide-ranging applications of individuals' risk perception and decision-making. Although a good amount of the course draws examples from health and medicine, we take a broader view of risk and behavior that should be interesting for students of any background. Specific topics will include the psychology behind risk-taking, public service communication about health and environmental catastrophes, crisis communication and public relations, and how gain-loss framing affects financially risky decisions.

### COMM 308: Heath Disparities

(1 Unit)
Understanding and recognizing the preventable differences in health as well as health care is inherent in working toward reducing and eliminating the inequality experienced by so many due to their race, gender, age, religion, language, sexual orientation, mental and physical ability, socio-economic status, and geography. This course will cover the historical, cultural, and current issues facing these groups through a social ecological perspective that highlights the importance of communication in not only perpetrating and reinforcing these health inequalities but also in alleviating them.

### COMM 310: Health Communication

(1 unit)
Health communication is a growing field of research because of its potential to aid in understanding

and influencing health outcomes in a variety of interpersonal, organizational, and mass communication contexts. Communication is the key to prevention, promotion, and chance. This course will introduce you to the exciting and important theory and research being developed in the health communication discipline. *Price*

## E&M 375: Health Economics

(1 Unit)
Prerequisite: E&M 101 or permission of instructor.
A microeconomic and institutional analysis of health care services in the U.S., with particular reference to issues of cost and access. Topics include the demand for medical care, health insurance, economic regulation of hospitals, the markets for physicians and medical education, and the political economy of health care. Not offered every year. *Saltzman.*

## PHIL 220: Philosophy and History of Science

(1 Unit)
Considers the following questions: What is science? What is scientific explanation? What are the ontological commitments of a scientist? To what extent does the culture of a scientific community affect results of that community? *Kirby.*

## PHIL 308: Biomedical Ethics

(1 Unit)
The application of major ethical theories to some of the moral problems raised by recent developments in medical technology. Does increased medical knowledge (the end) justify experimentation with human subjects (the means)? How much should a patient be told and who decides? Do parents have the right to give birth to a defective infant and thereby apparently pollute the gene pool? To whom is the genetic counselor responsible—fetus, parent, future generations? Is there a right to die? Who should be the ultimate decision-maker—physician, patient, pastor? Is health care a right or a privilege? In answering these dilemmas, are there any moral rules to follow or does each person decide what is best in the situation? *Madhok.*

## PSYC 230: Health Psychology

(1 Unit)
Prerequisites: PSYC 101 or permission of instructor.
The role of behavior in the prevention of disease and in the enhancement of health. Looks at behavior in relation to stress, pain, cardiovascular disease, cancer, alcohol abuse, weight control, psychoneuroimmunology. Contrasts biomedical and biopsychosocial approaches to health and disease. *Jechura.*

## PSYC 247: Drugs, Brain, and Behavior

(1 Unit)
Prerequisite: PSYC 101.
This course is intended as an introduction to the study of drug use, abuse, and addiction, with a focus on recreationally-used drugs. Basic principles of pharmacology and neural transmission will be examined to better understand how drugs influence our brain and behavior. The impact of drug use on society, as well as intervention approaches, will be considered throughout the course. *Wieth, Wilson*

## RS 261: Death and Dying

(1 Unit)
Human longing for a meaningful explanation of the mystery of death and dying is deep and universal. This comparative course examines a wide array of beliefs and rituals related to death and dying in a select number of world religions. In addition to gaining intellectual familiarity with cross-cultural beliefs and practices, students will be encouraged to analyze familiar religious and cultural practices surrounding death and dying. *Valdina.*

### SOC 370: Social Mobility and Inequity

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 and junior standing or permission of instructor.
An examination of the changing patterns of social stratification within the U.S. since World War II. Topics include income and wealth inequality, education and social mobility, the reorganization of the workplace, poverty and social welfare. *Verduzco-Baker.*

## Public Health Sciences Emphasis

### BIOL 260: Introduction to Bioinformatics

(1 unit)
Prerequisites: BIOL 210 or permission of instructor.
This is a hands-on, project-based course designed to provide students with an opportunity to conduct meaningful research projects using web-based bioinformatics tools. In previous projects, students have analyzed the genome of a newly-discovered bacteriophage, which was isolated by an Albion student in a previous semester and have done comparative genomic analyses of a chromosomal region from one or more Drosophila species as part of a larger collaborative genomics project. *Saville*

### BIOL 332: Microbiology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor; CHEM 154 recommended.
Introduction to the microbial world. Explores the morphology, physiology, genetics and diversity of microorganisms. Stresses the relationships among microbes and other organisms, including humans. Lecture and laboratory. *Olapade.*

### BIOL 367: Virology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
Are viruses living organisms or not? Addresses this and many more questions in molecular architecture, replication strategies, transmission modes, pathogenicity, carcinogenicity and usefulness of viruses. Lecture and discussion. Offered in alternate years. *Olapade.*

### BIOL 371: Pathophysiology

(1 Unit)
Prerequisites: BIOL 210, CHEM 152. CHEM 154 recommended.
Develops an understanding of the physiological basis of disease. Relates changes in function that contribute to disease states in otherwise normally functioning physiological systems. Presents the functional anatomy and physiological basis of "healthy" human systems in a normal state, and then examines compromises that result from disease states. Intended for students planning to pursue post-graduate studies in programs such as nursing, physician assistant, physical therapy and medicine. *Rabquer.*

## BIOL 372: Immunology

(1 Unit)
Prerequisites: BIOL 300 or permission of instructor.
A study of the immune system. Explores innate, humoral, and cellular immune responses, and the application of immunity in health and disease through the study of scientific literature, student presentations, and project-based learning. Lecture. *Rabquer.*

## BIOL 337: Biochemistry

(1 Unit)
Prerequisites: CHEM 212
Must be taken as Biology 337 for credit toward the major. Lecture. Same as CHEM 337. *Staff.*

OR

## CHEM 337: Biochemistry

(1 Unit)
Prerequisite: CHEM 212.
An in-depth study of biochemical structure, catalysis, metabolism and cellular regulation. Understanding living systems through molecular and chemical models. Areas of emphasis include macromolecular structure, enzyme mechanisms and kinetics, metabolic mechanisms and regulation, genomics, and proteomics. Same as BIOL 337. *Rohlman, Streu.*

## CHEM 352: Medicinal Chemistry

(1 Unit)
Prerequisite: CHEM 337
This course is designed for upper-level science students with an interest in drug design. Lecture topics will include the common classes of drug targets, pharmacodynamics and pharmacokinetics, drug design and development, chemical approaches to drug discovery, specific medicinal chemistry approaches to antimicrobials, chemotherapeutics, analgesics, and drugs targeting the nervous system. Historical as well as current literature will be presented in both lecture and discussion formats. Students will be expected to become familiar with reading and understanding primary research papers in medicinal chemistry. *Streu.*

## KIN 200: Medical Terminology

(1/2 Unit)
Focuses on the language of medicine—the prefixes, suffixes, word roots and their combining forms—by review of each system of the body. Emphasizes word construction, spelling, usage, comprehension and pronunciation. Introduces students to anatomy and physiology, pathology, diagnostic/surgical procedures, pharmacology and medical abbreviations. *Betz, C. Moss.*

## KIN 210: Nutrition

(1 unit)
This course will provide students with the foundation for an understanding of the basics of nutrition. The focus will be on the application of nutritional principles to a daily dietary practice and how food choices can enhance health and reduce the risk of chronic diseases. *Cousins, Yocum, Betz, Staff*

## KIN 305: Physical Activity Epidemiology

(1 Unit)
Physical Activity Epidemiology will focus on how leisure-time physical activity can be promoted to increase both longevity and quality of life. Students will be introduced to basic epidemiological concepts, the relatively new area of physical activity epidemiology, and the relevant literature that allows public health policy to be created based on the strength of the evidence. This course will examine the impact of physical activity on disease mortality and disease risk factors. By examining both classic and contemporary studies, students will be able to discern how the literature has changed over time and how current public health recommendations are better suited to the population as a whole. *(Betz)*

# Law, Justice, and Society

# Staff

**Patrick A. McLean**, director, Gerald R. Ford Institute for Leadership in Public Policy and Service.
B.A., University of Dayton; M.A., Miami University (Ohio).

**Edward J. Visco**, associate director, Gerald R. Ford Institute for Leadership in Public Policy and Service.
B.A., Albion College; M.Ed., Chestnut Hill College.

# Introduction

Law is one of the most significant expressions of a society's social and political development. We live in a period of widespread public interest in law that arises from a concern with problems of social justice, social control and social deviance. The traditional academic disciplines have increasingly focused on such issues as the nature and origin of law, law-making and law-breaking, rights and obligations, and freedom and responsibility. These are matters of increasing concern to teachers, social workers, business executives, doctors and public servants whose professional responsibilities demand knowledge of the relationship of law to their own fields.

The goals of this interdisciplinary concentration, which is selected in addition to an academic major, are to affirm the intellectual importance of the study of law and society, and to provide a framework whereby faculty and students may explore different approaches to law by using the resources of one or more disciplines. The curriculum is designed to equip students with the knowledge to understand legal institutions, practices and ideas, and also to grasp their relationship to larger social, economic and political forces. The concentration in law, justice, and society should be seen within the context of an undergraduate liberal education. That is, it is not a preprofessional program, but is designed for interested students, whatever their future career orientation.

Neither the American Bar Association (ABA) nor the American Association of Law Schools (AALS) recommends a specific course of pre-law studies. Instead, both recommend a broad-based undergraduate program of study that encourages the acquisition of critical reading, writing and analytical skills—i.e., a liberal arts education.

**Admission—**The law, justice, and society concentration is open to all students, regardless of academic major. Students must apply for admission to the concentration, and due to the nature of the requirements, are advised to do so no later than the second semester of their sophomore year. For more information and an application form, contact the director of the concentration.

# Student Learning Outcomes

# Lisa and James Wilson Institute for Medicine

# PreMedical Postbac Certificate

## The following are required for the premedical postbac certificate:

## Required Courses:

## Elective Courses:

**Seven units, drawn from the approved list of courses below. Course plan made with consultation of Wilson Institute Health Professions Advisors. Additional courses may count toward the certificate pending approval of the Wilson Institute for Medicine.**

### ANTH 242: Biological Anthropology

(1 Unit)
Prerequisite: ANTH 105 or permission of instructor.
Biological anthropology is the holistic study of the origins and bio-cultural nature of the human species. This course addresses several of the most important areas of biological anthropology such as human evolution; patterns of human physical diversity; human health and nutrition; gender and sexuality; bioarchaeology; primatology; dynamics of genetic ancestry, race, and ethnic identity; and forensic anthropology. *Webb.*

### ANTH 279: Global Health

(1 Unit)
ANTH 105 or SOC 101, or permission of instructor
This course explores the economic, cultural, and political factors leading to the uneven distribution of health and disease around the world. Students will learn about the global burden of various diseases -- acute and chronic, epidemiological transitions, and syndemics. Programming considerations and global health goals will also be considered. The course will draw from public health, epidemiology, (medical) anthropology, sociology, and economics. *Webb.*

### ANTH 368: Medical Anthropology

(1 Unit)
ANTH 105 and junior standing or permission of the instructor.
A survey of the cultural practices that contribute to understandings of health and disease. The course introduces students to a broad range of topics in medical anthropology, including examination of treatment therapies in Western and non-Western cultures. Students are encouraged to move beyond purely biological understandings of health and disease and consider how healing practices are embedded within social, cultural, economic, and political domains. This course will be of particular interest to premedical students and those interested in allied health professions. *Webb.*

### BIOL 301: Cell Biology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
An in-depth investigation of biological systems at the cellular, subcellular and molecular levels. Studies of a variety of cell types and energy relations within cells. Lecture emphasizes metabolism, metabolic regulation and cellular diversity. Laboratory emphasizes measurement and analysis of subcellular features. *Cervantes.*

## BIOL 324: Developmental Biology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
The genetic, molecular and cellular mechanisms underlying early development of multicellular organisms. Potential topics include fertilization and early development, gene regulation during development, neural pathfinding, cell signaling, cell division and growth, organogenesis, limb development, metamorphosis, regeneration, sex determination, the evolution of development, genomics, and stem cell research. Lecture and laboratory. *Albertson.*

## BIOL 332: Microbiology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor; CHEM 154 recommended.
Introduction to the microbial world. Explores the morphology, physiology, genetics and diversity of microorganisms. Stresses the relationships among microbes and other organisms, including humans. Lecture and laboratory. *Olapade.*

## BIOL 341: Physiology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor; CHEM 154 recommended.
A study of the function of living organisms. Each physiological system is examined at the molecular, cellular, and tissue level. Particular focus is given to how each system is regulated and the interplay between systems. Lecture and laboratory. *Rabquer*.

## BIOL 360: Genomic Analysis

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
*Saville*

## BIOL 362: Molecular Biology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor; CHEM 154 recommended.
The theory and practice of modern molecular genetics will be explored. Techniques potentially considered include: DNA cloning, DNA hybridization, the polymerase chain reaction, DNA sequencing, and the expression of cloned genes in bacteria. Lecture/discussion and laboratory. Offered in alternate years. *Saville.*

## BIOL 367: Virology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
Are viruses living organisms or not? Addresses this and many more questions in molecular architecture, replication strategies, transmission modes, pathogenicity, carcinogenicity and usefulness of viruses. Lecture and discussion. Offered in alternate years. *Olapade.*

## BIOL 371: Pathophysiology

(1 Unit)
Prerequisites: BIOL 210, CHEM 152. CHEM 154 recommended.

Develops an understanding of the physiological basis of disease. Relates changes in function that contribute to disease states in otherwise normally functioning physiological systems. Presents the functional anatomy and physiological basis of "healthy" human systems in a normal state, and then examines compromises that result from disease states. Intended for students planning to pursue post-graduate studies in programs such as nursing, physician assistant, physical therapy and medicine. *Rabquer*.

## BIOL 372: Immunology

(1 Unit)
Prerequisites: BIOL 300 or permission of instructor.
A study of the immune system. Explores innate, humoral, and cellular immune responses, and the application of immunity in health and disease through the study of scientific literature, student presentations, and project-based learning. Lecture. *Rabquer*.

## CHEM 337: Biochemistry

(1 Unit)
Prerequisite: CHEM 212.
An in-depth study of biochemical structure, catalysis, metabolism and cellular regulation. Understanding living systems through molecular and chemical models. Areas of emphasis include macromolecular structure, enzyme mechanisms and kinetics, metabolic mechanisms and regulation, genomics, and proteomics. Same as BIOL 337. *Rohlman, Streu.*

## CHEM 351: Biophysical Chemistry

(1 Unit)
Prerequisites: CHEM 301, CHEM 337.
Examination of the physical chemistry of macromolecules in living systems. A study of thermodynamics, kinetics, ligand binding and spectroscopy related to the understanding of macromolecular structure and function. *Rohlman, Streu*

## CHEM 352: Medicinal Chemistry

(1 Unit)
Prerequisite:  CHEM 337
This course is designed for upper-level science students with an interest in drug design. Lecture topics will include the common classes of drug targets, pharmacodynamics and pharmacokinetics, drug design and development, chemical approaches to drug discovery, specific medicinal chemistry approaches to antimicrobials, chemotherapeutics, analgesics, and drugs targeting the nervous system. Historical as well as current literature will be presented in both lecture and discussion formats. Students will be expected to become familiar with reading and understanding primary research papers in medicinal chemistry. *Streu.*

## COMM 211: Risk Communication

(1 Unit)
This course is an introduction to risk communication, giving a communication research perspective to wide-ranging applications of individuals' risk perception and decision-making.  Although a good amount of the course draws examples from health and medicine, we take a broader view of risk and behavior that should be interesting for students of any background.  Specific topics will include the psychology behind risk-taking, public service communication about health and environmental catastrophes, crisis communication and public relations, and how gain-loss framing affects financially risky decisions.

## COMM 213: Intercultural Communication

(1 Unit)
An exploration of the role communication plays in defining and sustaining culture both globally and locally. By applying current research and theories in intercultural communication, students are introduced to major topics pertaining to communication between cultures. Topics include, but are not limited to: the way a culture's deep meaning structure impacts the way people communicate, culture-specific verbal and nonverbal norms, advice on verbal and nonverbal behavior when doing business internationally, adjusting to culture shock and exploring various subcultures in the United States. *Erlandson.*

## COMM 308: Heath Disparities

(1 Unit)
Understanding and recognizing the preventable differences in health as well as health care is inherent in working toward reducing and eliminating the inequality experienced by so many due to their race, gender, age, religion, language, sexual orientation, mental and physical ability, socio-economic status, and geography. This course will cover the historical, cultural, and current issues facing these groups through a social ecological perspective that highlights the importance of communication in not only perpetrating and reinforcing these health inequalities but also in alleviating them.

## COMM 310: Health Communication

(1 unit)
Health communication is a growing field of research because of its potential to aid in understanding and influencing health outcomes in a variety of interpersonal, organizational, and mass communication contexts. Communication is the key to prevention, promotion, and chance. This course will introduce you to the exciting and important theory and research being developed in the health communication discipline. *Price*

## KIN 233: Human Gross Anatomy

(1 Unit)
Prerequisite: KIN 230.
The basic musculoskeletal anatomical concepts related to the human body. Emphasizes applications to physical activity and musculoskeletal injury. Lecture and laboratory (cadaver). *R.Moss.*

## KIN 305: Physical Activity Epidemiology

(1 Unit)
Physical Activity Epidemiology will focus on how leisure-time physical activity can be promoted to increase both longevity and quality of life. Students will be introduced to basic epidemiological concepts, the relatively new area of physical activity epidemiology, and the relevant literature that allows public health policy to be created based on the strength of the evidence. This course will examine the impact of physical activity on disease mortality and disease risk factors. By examining both classic and contemporary studies, students will be able to discern how the literature has changed over time and how current public health recommendations are better suited to the population as a whole. *(Betz)*

## KIN 310: Research and Statistics in Kinesiology

(1 Unit)
Qualitative and quantitative research approaches specific to the various disciplinary areas in kinesiology. Topics include research ethics; selecting and developing a research problem; reviewing the literature, developing research hypotheses, writing research proposals; issues in measurement, data collection issues; statistical analyses; and communicating the results of research. *Betz.*

## KIN 369: Human Physiology

(1 Unit)
Prerequisite: KIN 230.
This course focuses on the function of organs and organ systems and how they interact with each other to maintain homeostasis. This course includes three 65-minute lectures and a two hour and twenty-minute lab per week. Lecture and Laboratory. *Betz, Cousins, Staff*

## KIN 379: Exercise Physiology

(1 Unit)
Prerequisite: KIN 369 or permission of instructor.
An examination of the mechanisms and processes by which the body performs its various functions. Emphasis on cardiovascular, respiratory, muscular and nervous systems as they relate to physical activity. This course includes three 65-minute lectures and a two hour and twenty-minute lab per week. Lecture and Laboratory. *Betz, Cousins, Staff.*

## MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

## PHIL 308: Biomedical Ethics

(1 Unit)
The application of major ethical theories to some of the moral problems raised by recent developments in medical technology. Does increased medical knowledge (the end) justify experimentation with human subjects (the means)? How much should a patient be told and who decides? Do parents have the right to give birth to a defective infant and thereby apparently pollute the gene pool? To whom is the genetic counselor responsible—fetus, parent, future generations? Is there a right to die? Who should be the ultimate decision-maker—physician, patient, pastor? Is health care a right or a privilege? In answering these dilemmas, are there any moral rules to follow or does each person decide what is best in the situation? *Madhok.*

## PSYC 230: Health Psychology

(1 Unit)
Prerequisites: PSYC 101 or permission of instructor.
The role of behavior in the prevention of disease and in the enhancement of health. Looks at behavior in relation to stress, pain, cardiovascular disease, cancer, alcohol abuse, weight control, psychoneuroimmunology. Contrasts biomedical and biopsychosocial approaches to health and disease. *Jechura.*

## PSYC 236: Social Psychology

(1 Unit)
Prerequisite: PSYC 101.
The scientific study of the ways people think, feel and behave in social situations. Topics include self-perception and self-presentation, person perception, stereo-typing and prejudice, interpersonal attraction and close relationships,

altruism, aggression, attitudes and persuasion, conformity, and group processes. Also examines theory and research in several applied areas of social psychology, including law and health. *Hill, Staff.*

## PSYC 241: Neuroscience I: Brain Structure and Function

(1 Unit)
Prerequisite: PSYC 101, or BIOL 195, or permission of instructor.
An introduction to brain structure and function. Emphasis on the way the nervous system is organized to process information, construct representations of the world and generate adaptive behavior. Lecture, discussion, dissection. Same as NEUR 241. *Jechura, Keyes, Schmitter, Wieth, Wilson.*

## PSYC 243: Sensation & Perception

(1 Unit)
Prerequisite: PSYC 101.
Operation of sensory systems and major principles of perception. Addresses the classical question, "Why do things look as they do?" Not offered every year. *Wieth.*

## PSYC 247: Drugs, Brain, and Behavior

(1 Unit)
Prerequisite: PSYC 101.
This course is intended as an introduction to the study of drug use, abuse, and addiction, with a focus on recreationally-used drugs. Basic principles of pharmacology and neural transmission will be examined to better understand how drugs influence our brain and behavior. The impact of drug use on society, as well as intervention approaches, will be considered throughout the course. *Wieth, Wilson*

## PSYC 251: Child and Adolescent Development

(1 Unit)
Prerequisite: PSYC 101.
Focuses on physical, cognitive, social and emotional development with emphasis on the periods of infancy, childhood and adolescence. Reviews methods for studying the developing person and major theoretical approaches. *Elischberger, Francis, Keyes, Staff.*

## PSYC 254: Lifespan Development

(1 Unit)
Prerequisite: PSYC 101
Focuses on physical, cognitive, social and emotional development across the lifespan. Adopts an integrative and interdisciplinary approach to understanding the human experience from birth to death. *Elischberger, Keyes, Staff.*

## PSYC 260: Psychology of Language

(1 Unit)
Prerequisite: PSYC 101.
Examines the relationship between the uniquely human cognitive capacity of language and other cognitive processes. Acquisition, comprehension, production, and utilization are studied with particular reference to structure and meaning. Not offered every year. *Staff.*

### PSYC 265: Psychology of Mental Illness

(1 Unit)
Prerequisite: PSYC 101.
This course offers an introduction to the historical origins, perspectives, theories, methods, and empirical findings of psychopathology and clinical psychology. Throughout the semester, students will gain greater understanding of the identification and treatment of psychological disorders. Students will be encouraged to critically examine the construct of mental health and to deepen their empathy for those experiencing mental illness through lecture, case study review, class assignments, and discussion. Throughout the course, students will be exposed to the complexities of human behavior and psychological difficulties, as well as the cultural, economic, and ethical issues that arise in diagnosing and treating mental illness. *Keyes, Staff.*

### PSYC 267: Psychology of Personality

(1 Unit)
Prerequisite: PSYC 101.
Examines the major historical theories of personality and their influence on modern, empirically-derived theories of personality. Attention is given to each personality theory's relevance to historical and current events, as well as to the students' own personal and professional development. *Christopher.*

### SOC 356: Social Psychology: Sociological Perspectives

(1 Unit)
Prerequisite: SOC 101 and junior standing or permission of instructor.
The study of the relationship between personal experiences and society. Explores how our sense of self, identity, subjective experience, feelings, beliefs, and relationships to and interactions with others are shaped by and influence social life. Focuses on theoretical traditions and trends within micro-sociology and their applications and usefulness for empirical research. Special attention will be paid to connecting the micro-workings of social life to larger institutional, cultural and political processes and issues. *Melzer.*

## Additional Requirements:

**All students completing a PreMedical Postbac Certificate are required to successfully complete professional development workshops on professional school test (MCAT/DAT/GRE) preparation, effective time management, successful study skill strategies, reflective writing, professional school application essay writing, and current issues in healthcare.**

# Mathematics and Computer Science

# Faculty

**Mark E. Bollman**, chair and professor.
B.A., Northwestern University; M.A., University of Michigan; Ph.D., Central Michigan University. Appointed 1999.

**Paul L. Anderson**, professor.
B.S., M.S., Ph.D., Colorado School of Mines. Appointed 1990.

**Drew R. Ash**, visiting assistant professor.

B.A., Ithaca College; M.S., Ph.D., University of Denver. Appointed 2017.

**April Grow,** visiting instructor of mathematics.

A.A. Grand Rapids Community College, B.S. Grand Valley State University, M.A. Central Michigan University. Appointed 2020.

**Darren E. Mason,** professor.
B.S., Ph.D., University of Minnesota. Appointed 2001.

**Karla R. McCavit,** instructor and Director of the Quantitative Studies Center

B.S., Adrian College, M.S., Michigan State University. Appointed 1995.

**David A. Reimann**, professor.
B.S., University of Toledo; M.A., Ph.D., Wayne State University. Appointed 1996.

**Yuming Zhang,** assistant professor of computer science.

B.S., Tsinghua University. M.S., Institute of Electrical Engineering, China Academy of Science. Ph.D., University of New Mexico. Appointed 2020.

# Introduction

The Mathematics and Computer Science Department at Albion College includes the disciplines of pure and applied mathematics, computer science and statistics.

The courses are structured to meet the overlapping needs of students who fall in one or more of the following categories: (1) those who wish to develop their appreciation of the power and beauty of mathematics; (2) those who wish to explore the dynamic field of computer science; (3) those who intend to pursue graduate work in mathematics, computer science or other related fields; (4) those who will exploit the applications of mathematics in the natural sciences, social sciences and other areas of quantitative studies; and (5) those who plan to enter the teaching profession in mathematics or computer science.

Computer science is the youngest of the liberal arts. It shares with mathematics strong historical ties as well as underlying valuses of abstraction, rigor and elegance. Throughtout history, mathematics and its algorithms have been developed to help the human condition improve. In the 20th centruy the development of the digital computer dramatically and positively transformed the modern world. Apple, Google, airbags, pacemakers, and a host of instances of human innovation would be impossible without this aspect of science. During its vigorous growth as an academic discipline, computer science has worked to map this abstraction onto physical devices. Computer science students will address significant problems: finite-precision arithmetic, limited storage capacity of data, and bounded processing capacity of a computer. They will devleop distinct methodologies: programming languages, data encoding and the analysis of the complexity of algorithms in terms of time and space requirements. And they will experiment with some results distinctive to computer science: the exisitence of the general-purpose computer, serial and parallele processing, and modularity and layers of adstraction in both hardware and software. This deep understanding of computer science will engage the student in discerning the benefits and limitations of computers in society.

The studey of algorithms is the theme underlying all aspects of computer science. Computer science students will learn to define a problem and specify a step-by step solution at a level of detail and clarity unparalleled in any other discipline. They will also examine the practical issues of efficient storage, manipulation and retrieval of data.

Computer science interact naturally with many other disciplines. Students will have opportunities to explore the interconnections amoung artificial intelligence, psychology and philosophy; to become involved in the physics and engineering of circuit design; to employ biological models in their study of genetic algorithms and neural networks; and to see aspects of grammar and linguistics in thier study of programming languages.

The major in data science at Albion College provides students with a rigorous quantitative plan of study including upper-division courses in both mathematics and computer science which lead to a solid understanding of the principles of data management, analysis, modeling, and forecasting. Data science is an interdisciplinary field that combines mathematics, statistics, and computer science in the serious study of large amounts of information, with the goal of making data- and statistically sound decisions in real-world problems across the spectrum.

# Career Opportunities

There has long been a demand in both industry and government for people with training in mathematics and statistics. The mathematics major who takes courses in computer science or statistics will enter an extremely favorable job market. There is also a need for secondary school teachers who are certified to teach mathematics or computer science. A major in mathematics provides a good foundation for further study in mathematics or for teaching on the secondary school level. With a degree in mathematics, it is also possible to gain admission to graduate school in other fields such as public policy, management and operations research.

Computer science students will enter a very favorable job market with opportunities in business, industry, government and private consulting. The study of fundamental principles of computer science and the strong mathematical component of this program fortify students with the lifelong learning skills essential for success in this rapidly changing field. Students with a mathematics major and a computer science minor will be prepared for graduate work in this or a related field.

Data science is one of the fastest-growing career areas worldwide. Majors will enter a very favorable job market with opportunities in business, industry, government, and private consulting.

# Special Features

The Mathematics and Computer Science Department annually awards approximately $30,000 in scholarships in honor of E. R. Sleight, a beloved mathematics professor who taught at Albion from 1908 to 1948. Prospective students with strong interests in mathematics are encouraged to contact the department to apply for these scholarships. Additional awards are made to outstanding upperclass students in mathematics and computer science.

Each year the Mathematics and Computer Science Department nominates five mathematics majors to membership in the Mathematical Association of America. The J. R. Lancaster Award is presented to the student who best exemplifies the liberally educated mathematics student. The E. R. Sleight Prize and the Ronald C. Fryxell Prize are awarded to the outstanding seniors in mathematics and computer science. Each summer several students receive stipends as Kresge Fellows and from other sources for independent research projects in the mathematical sciences. The Michigan Alpha chapter (established at Albion in 1937) of the mathematics honorary Kappa Mu Epsilon promotes mathematical lectures, films and social events. Students participate in the Michigan Autumn Take-Home Challenge, the Lower Michigan Mathematics Competition, and at the national level, in the William Lowell Putnam Competition and the Mathematical Contest in Modeling. Students are encouraged to attend and present papers at departmental colloquia and at regional conferences in undergraduate mathematics. Internships and the Oak Ridge Science Semester provide additional opportunities for intensive study in the mathematical sciences.

The Math/Stat Computing Laboratory is designed especially for students in mathematics, statistics and computer science courses. This computer laboratory features microcomputers running Windows and a laser printer for high-resolution graphics and typesetting. Statistics students routinely analyze data with the Minitab statistical analysis program; graphing calculators and the Mathematica computer algebra system are integrated into precalculus, calculus and higher-level mathematics courses. This lab is part of Albion's campus-wide computer network connecting faculty offices, classrooms, laboratories, public computer areas, printers, the library automation system and residence hall rooms. From computers on the network, students can access their files, run software on the campus network, interact with other computers, send email and browse the World Wide Web.

The E. R. Sleight Computing Laboratory contains a network of workstations dedicated for use by computer science students. These computers run individually or in parallel under the Linux operating system.

# Departmental Policy on Advanced Placement Credit

Credit earned through the Advanced Placement (AP) exams in calculus, computer science, or statistics may be applied, as appropriate, toward any major or minor in the department. Students who earn a 4 or 5 on the Calculus AB exam, or the AB subscore of the Calculus BC exam, receive credit for MATH 141. Students who earn a 4 on the Calculus BC exam receive credit for MATH 141, and those who earn a 5 on this exam receive credit for both MATH 141 and MATH 143. Students who earn a score of 4 or 5 on the Computer Science A or Computer Science AB exam will receive credit for CS 171. Students who earn a 4 or 5 on the statistics exam will receive credit for MATH 109.

# Student Learning Outcomes

## Students who complete the Mathematics B.A. major will be able to:

1. Articulate core concepts in calculus, differential equations & linear algebra, and analysis & algebra.
2. Write and understand abstract mathematical proofs, including those of algebraic, analytical, numerical, and logical type.
3. Demonstrate competence applying mathematical/quantitative concepts and methods to the modeling of real world phenomena.
4. Effectively use at least one higher level programming language to algorithmically solve both theoretical and practical problems.

## Students who complete the Mathematics, Actuarial emphasis B.A. major will be able to:

1. Explain and apply micro/macroeconomic concepts as well as financial accounting/management methodology to the analysis of contemporary financial models & problems.
2. Understand and employ calculus-based single and multivariate methods in probability and statistics, with a view towards successfully sitting for the SOA/CAS P/1 Exams.
3. Apply financial, mathematical, and probabilistic methods to the modeling and analysis of financial concepts including bonds, derivatives, arbitrage, hedging, and risk management, which prepares students to successfully sit for the IFM/3 Exam.
4. Effectively use a statistical programming language such as R to employ actuarial risk-management concepts such as data analysis, forecasting, and asset hedging.

## Students who complete the Mathematics B.A. with Elementary or Secondary certification will be able to:

1. Articulate core concepts in calculus, differential equations & linear algebra, and analysis & algebra.
2. Write and understand abstract mathematical proofs, including those of algebraic, analytical, numerical, and logical type.
3. Demonstrate competence applying mathematical/quantitative concepts and methods to the modeling of real world phenomena.
4. Effectively use at least one higher level programming language to algorithmically solve both theoretical and practical problems.
5. Students will be able to complete requirements for eligibility for certification.

## Students who complete the Mathematics minor will be able to:

1. Articulate core concepts in calculus, differential equations & linear algebra, and analysis or algebra.
2. Write and understand abstract mathematical proofs, including those of numerical, logical, and algebraic (or analytical) type.
3. Effectively use at least one higher level programming language to algorithmically solve both theoretical and practical problems.

## Students who complete the Applied Mathematics minor will be able to:

1. Articulate core concepts in calculus, differential equations & linear algebra.
2. Apply mathematical concepts ranging from elementary algebra, single and multivariate calculus, linear algebra, and differential equations to effectively model real-world phenomena.
3. Effectively use at least one higher level programming language to algorithmically solve both theoretical and practical problems.

## Students who complete the Mathematics minor, with Secondary Education Certification will be able to:

1. Articulate core concepts in calculus, differential equations & linear algebra, and analysis or algebra.
2. Write and understand abstract mathematical proofs, including those of algebraic, analytical, numerical, and logical type.
3. Effectively use at least one higher level programming language to algorithmically solve both theoretical and practical problems.
4. Students will be able to complete requirements for eligibility for certification.

## Students who complete the Statistics minor will be able to:

1. Articulate core concepts in calculus, differential equations & linear algebra, and analysis or algebra.
2. Understand and employ calculus-based single and multivariate methods in probability and statistics.
3. Implement various statistical methods for data analysis, inference, and modeling/forecasting in real-world situations.

## Students who complete the Computer Science B.A. major will be able to:

1. Apply computer science theory and software development fundamentals to produce computing-based solutions.
2. Analyze a complex computing problem and apply principles of computing and other relevant disciplines to identify solutions.
3. Design, implement, and evaluate computing-based solutions that meet requirements in the context of the program's discipline.
4. Effectively communicate professional contexts in oral and written form.

## Students who complete the Computer Science minor can will be able to:

1. Design, implement, and evaluate computing-based solutions that meet requirements in the context of the program's discipline.
2. Effectively communicate professional contexts in oral and written form.

## Students who complete the Data Science major will be able to:

1. Use appropriate statistical techniques and predictive analytics on available data to deliver insights and discover new relations.
2. Visualize complex and variable data.
3. Collect and integrate different data source and provide them for further analysis.
4. Employ at least one programming language (e.g., Python, R) and multivariate statistical techniques – including linear and nonlinear multivariable regression – to forecast model trends.
5. Design and implement programs that use a database, including using techniques for searching for patterns in data
6. Recognize and use efficient data structures and algorithms to solve data-driven problems.
7. Design the logical and physical structure for effective data management according to data type, data model, and application.
8. Understand the concept of data ethics, including tradeoffs between individual privacy and security.
9. Determine, apply, and evaluate a broad range of data mining and machine learning tools with implementations to real data.

# Applied Mathematics Minor

## Requirements for Minor in Applied Mathematics

Not open to mathematics majors.

### CS 171: Introduction to Computer Science I

(1 Unit)
Prerequisite: MATH 125 (or equivalent) or permission of instructor.
Designed to be the first computer science course taken by students in mathematics and computer science. Topics include fundamentals of computation and algorithmic problem-solving, data types, control structures, the object-oriented programming paradigm and applications. Introduces a high-level programming language such as Java or Python. *Reimann.*

### MATH 299: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisite: MATH 143 or CS 173.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation and a paper on a mathematics/computer science topic of personal interest. Same as CS 299. Staff.

## Five Units in Mathematics, Including:

## MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 245: Multivariate Calculus

(1 Unit)
Prerequisite: MATH 143.
Vectors, inner and cross products, and vector-valued functions including parametric represetations of curves and surfaces in space. Partial differentiation, the chain rule, function gradients, implicit differentiation, multivariate optimization, Lagrange multipliers, multiple integrals and vector analysis, including divergence and curl of vector fields, as well as the theorems of Green, Stokes and Gauss. *Mason.*

## MATH 247: Differential Equations and Linear Algebra

(1 Unit)
Prerequisite: MATH 245.
First-order differential equations and numerical algorithms of Euler and Runge-Kutta. Linear algebraic systems, Gaussian elimination, row-echelon form matrix algebra, inverses and determinants. Vector spaces, subspaces, linear independence, bases, span, dimension, linear mappings and function spaces. Second and higher-order linear differential equations. Eigenvectors, eigenvalues and spectral decomposition methods. First-order linear differential systems, including solutions methods using matrix exponentials. Applications focus on problems in physics, chemistry, biology, economics and engineering. Additional topics may include nonlinear dynamical systems, stability theory, transform theory and power series solutions. *Mason.*

Plus One From:

## MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

## MATH 316: Numerical Analysis

(1 Unit)
Prerequisites: MATH 247 and CS 171.
Methods of obtaining numerical solutions to mathematical problems. Stresses the implementation and error analysis of algorithms. Topics include solution of non-linear equations, systems of equations, interpolating polynomials, numerical integration and differentiation, numerical solution to ordinary differential equations, and curve fitting. Offered in alternate years. Same as CS 316. *Mason.*

## MATH 326: Operations Research

(1 Unit)
Prerequisites: MATH 247.
An introduction to computational methods in mathematical modeling including linear programming and Markov chains. Applications in business, economics and systems engineering. Knowledge of probability is helpful. Offered in alternate years. Same as CS 326. *Mason.*

## MATH 333: Complex Analysis

(1 Unit)
Prerequisites: MATH 239 and MATH 245.
An introduction to complex variable theory. Specific topics to be covered include elementary and analytic functions, differentiation and integration in the complex plane, series representations, residues and poles, transform theory, and conformal mapping. Offered in alternate years. *Bollman.*

## MATH 360: Mathematical Modeling

(1 Unit)
Prerequisites: MATH 247 and CS 171.
An introduction to analytical methods in mathematical modeling, including nonlinear optimization, dynamical systems and random processes. Applications in physics, biology, economics and systems engineering. Knowledge of probability and statistics is helpful. Same as CS 360. *Mason.*

## MATH 370: Partial Differential Equations

(1 Unit)
Prerequisites: MATH 239 and MATH 247.
MATH 331 recommended. A study of the theory and applications of partial differential equations (PDEs). Linear and nonlinear PDEs, including quasilinear first order equations, conservation laws, discontinuous solutions, classification of PDEs, wave propagation in multiple space dimensions, Fourier analysis and separation of variables, Sturm-Liouville theory, fundamental solutions for equations of parabolic and elliptic type, including the maximum principle. Applications in biology, chemistry, engineering and physics. Offered in alternate years. *Mason.*

## MATH 380: Mathematical Physics

(1 Unit)
Same as PHYS 380. *Staff.*

# Computer Science Minor

## Requirements for Minor in Computer Science

## Five and One-quarter Units in Computer Science, Including:

### CS 171: Introduction to Computer Science I

(1 Unit)
Prerequisite: MATH 125 (or equivalent) or permission of instructor.
Designed to be the first computer science course taken by students in mathematics and computer science. Topics include fundamentals of computation and algorithmic problem-solving, data types, control structures, the object-oriented programming paradigm and applications. Introduces a high-level programming language such as Java or Python. *Reimann.*

### CS 173: Introduction to Computer Science II

(1 Unit)
Prerequisite: CS 171.
A continuation of CS 171. Emphasizes advanced object-oriented programming (interfaces, multiple inheritance, reflections), abstract data types (stacks, queues, lists, strings, trees, graphics, etc.) and analysis of algorithms. Other topics include recursion, searching and sorting, simulation and an introduction to some of the advanced areas of computer science, e.g., computer organization, artificial intelligence and user interfaces. Students refine their programming skills in a high-level programming language such as Java or Python. Laboratory. *Reimann.*

### CS 299: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisite: MATH 143 or CS 173.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation and a paper on a mathematics/computer science topic of personal interest. Same as MATH 299. *Staff.*

## Plus Three Additional Units at the 200-level or Higher:

At least two of these three units must be selected from:

### CS 352: Algorithms

(1 Unit)
Prerequisites: MATH 239 and CS 171.
Focuses on the design and efficiency of algorithms. Covers the basic algorithm paradigms including graph traversals, greedy algorithms, divide and conquer, dynamic programming and flow algorithms. Introduces complexity theory, NP-completeness and polynomial-time reductions. Additional topics may include approximation algorithms, randomized algorithms and linear programming. Offered in alternate years. *Reimann.*

### CS 354: Computer Organization

(1 Unit)
Prerequisite: CS 173.
Organization of digital computers: digital logic, arithmetic, assembly language, data paths, memory, input-output, secondary storage devices, multiprocessors and computer performance. Programming tools and techniques are also discussed with emphasis on their application in assembly language. Offered in alternate years. *Reimann.*

### CS 356: Programming Languages

(1 Unit)
Prerequisite: CS 173.
A survey of the structure of programming languages and programming as an abstract concept. Topics include syntax and semantics, scope rules, environments, types, procedures, parameters, overloading, parametric polymorphism and inheritance. Projects include programming in the functional paradigm using the Scheme programming language and development of a language interpreter. Offered in alternate years. *Reimann.*

### CS 358: Foundations of Computing

(1 Unit)
Prerequisites: MATH 239 and CS 171.
The theoretical underpinnings of computer science: models of computation including automata, Turing machines, circuits, the Chomsky language hierarchy, Church's thesis, computable and noncomputable functions, recursive and recursively enumerable sets, reducibility and introduction to complexity theory. *Jordon.*

## Required Cognates:

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### MATH 239: Discrete Structures

(1 Unit)
Prerequisite: MATH 141.
A survey of discrete mathematics with topics selected from set theory, functions and relations, number theory, combinatorics, graph theory, logic (predicate calculus, quantifiers), introduction to proof techniques, and probability. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Kamischke.*

## Other Requirements

Students are encouraged to elect cognates in a specific field of interest in consultation with their adviser. Possible cognate areas include, but are not limited to, mathematics, physics, philosphy, psychology, and economics.

All computer science courses must be taken for a numerical grade, except those offered only on a credit/no credit basis.

A minimum grade of 2.0 is required in any mathematics or computer science course used as a prerequisite for another course in the department.

# Computer Science, B.A.

## Requirements for the Major (8.5 Units):

### CS 171: Introduction to Computer Science I

(1 Unit)
Prerequisite: MATH 125 (or equivalent) or permission of instructor.
Designed to be the first computer science course taken by students in mathematics and computer science. Topics include fundamentals of computation and algorithmic problem-solving, data types, control structures, the object-oriented programming paradigm and applications. Introduces a high-level programming language such as Java or Python. *Reimann.*

### CS 173: Introduction to Computer Science II

(1 Unit)
Prerequisite: CS 171.
A continuation of CS 171. Emphasizes advanced object-oriented programming (interfaces, multiple inheritance, reflections), abstract data types (stacks, queues, lists, strings, trees, graphics, etc.) and analysis of algorithms. Other topics include recursion, searching and sorting, simulation and an introduction to some of the advanced areas of computer science, e.g., computer organization, artificial intelligence and user interfaces. Students refine their programming skills in a high-level programming language such as Java or Python. Laboratory. *Reimann.*

### CS 275: Software Development

(1 Unit)
Prerequisite: CS 173.
An introduction to the techniques of developing large software projects including unit testing, version control and build management. Covers the popular industrial languages C and C++ and includes a large-group programming project. Offered every third year. *Reimann, Staff.*

### CS 299: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisite: MATH 143 or CS 173.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation and a paper on a mathematics/computer science topic of personal interest. Same as MATH 299. *Staff.*

### CS 352: Algorithms

(1 Unit)
Prerequisites: MATH 239 and CS 171.
Focuses on the design and efficiency of algorithms. Covers the basic algorithm paradigms including graph traversals, greedy algorithms, divide and conquer, dynamic programming and flow algorithms. Introduces complexity theory, NP-completeness and polynomial-time reductions. Additional topics may include approximation algorithms, randomized algorithms and linear programming. Offered in alternate years. *Reimann.*

### CS 354: Computer Organization

(1 Unit)
Prerequisite: CS 173.
Organization of digital computers: digital logic, arithmetic, assembly language, data paths, memory, input-output, secondary storage devices, multiprocessors and computer performance. Programming tools and techniques are also discussed with emphasis on their application in assembly language. Offered in alternate years. *Reimann.*

### CS 356: Programming Languages

(1 Unit)
Prerequisite: CS 173.
A survey of the structure of programming languages and programming as an abstract concept. Topics include syntax and semantics, scope rules, environments, types, procedures, parameters, overloading, parametric polymorphism and inheritance. Projects include programming in the functional paradigm using the Scheme programming language and development of a language interpreter. Offered in alternate years. *Reimann.*

### CS 399: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisites: CS 299 and senior standing.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation, a departmental major assessment examination and an oral presentation on a mathematics/computer science topic of personal interest. Offered only on a credit/no credit basis. Same as MATH 399. *Staff.*

AND

Two additional units of computer science courses numbered 200 or above.

## Required Cognates:

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in

these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### MATH 239: Discrete Structures

(1 Unit)
Prerequisite: MATH 141.
A survey of discrete mathematics with topics selected from set theory, functions and relations, number theory, combinatorics, graph theory, logic (predicate calculus, quantifiers), introduction to proof techniques, and probability. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Kamischke.*

## Other Requirements:

Students are encouraged to elect cognates in a specific field of interest in consultation with their adviser. Possible cognate areas include, but are not limited to, mathematics, physics, philosphy, psychology, and economics.

All computer science courses must be taken for a numerical grade, except those offered only on a credit/no credit basis.

A minimum grade of 2.0 is required in any mathematics or computer science course used as a prerequisite for another course in the department.

## Notes:

The Mathematics and Computer Science Department may waive one or more of the foundation course requirements for students with advanced high school computer science perparation. Students may enroll in Internship (391, 392) and Directed Study (411, 412) in consultation with their advisers.

# Data Science, B.A.

## Requirements for the Major in Data Science

## Mathematics requirements: (5 Units)

### MATH 136: Applied Linear Algebra

(.5 Unit)
An introduction to linear algebra and its application emphasizing the use of computational software. Topics will include vectors, matrices, matrix operations and decompositions, Gaussian elimination, and eigenvalues. Applications of linear algebra will include least squares approximations, solving systems of equations, and time permitting, special topics. *Ash*

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in

mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 239: Discrete Structures

(1 Unit)
Prerequisite: MATH 141.
A survey of discrete mathematics with topics selected from set theory, functions and relations, number theory, combinatorics, graph theory, logic (predicate calculus, quantifiers), introduction to proof techniques, and probability. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Kamischke.*

## MATH 245: Multivariate Calculus

(1 Unit)
Prerequisite: MATH 143.
Vectors, inner and cross products, and vector-valued functions including parametric represetations of curves and surfaces in space. Partial differentiation, the chain rule, function gradients, implicit differentiation, multivariate optimization, Lagrange multipliers, multiple integrals and vector analysis, including divergence and curl of vector fields, as well as the theorems of Green, Stokes and Gauss. *Mason.*

## MATH 299: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisite: MATH 143 or CS 173.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation and a paper on a mathematics/computer science topic of personal interest. Same as CS 299. Staff.

## MATH 399: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisites: MATH 299 and senior standing.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation, a departmental major assessment examination

and an oral presentation on a mathematics/computer science topic of personal interest. Offered only on a credit/no credit basis. Same as CS 399. *Staff.*

## Statistics requirements: (2 Units)

### MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

### MATH 311: Regression and Time Series Models

(1 Unit)
Covers two topics in detail: multiple linear regression analysis and time series analysis. Inherent to both topics: parsimonious linear models, parameter estimation, diagnostic checking, and forecasting. Uses the matrix approach for multiple linear regression, and the Box-Jenkins methodology for constructing autoregressive-integrated moving average (ARIMA) models for time series analysis. Employs the statistical package MINITAB for analyzing all real-world data sets. *Anderson.*

## Computer Science requirements: (6 Units)

### CS 171: Introduction to Computer Science I

(1 Unit)
Prerequisite: MATH 125 (or equivalent) or permission of instructor.
Designed to be the first computer science course taken by students in mathematics and computer science. Topics include fundamentals of computation and algorithmic problem-solving, data types, control structures, the object-oriented programming paradigm and applications. Introduces a high-level programming language such as Java or Python. *Reimann.*

### CS 173: Introduction to Computer Science II

(1 Unit)
Prerequisite: CS 171.
A continuation of CS 171. Emphasizes advanced object-oriented programming (interfaces, multiple inheritance, reflections), abstract data types (stacks, queues, lists, strings, trees, graphics, etc.) and analysis of algorithms. Other topics include recursion, searching and sorting, simulation and an introduction to some of the advanced areas of computer science, e.g., computer organization, artificial intelligence and user interfaces. Students refine their programming skills in a high-level programming language such as Java or Python. Laboratory. *Reimann.*

### CS 261: Computers, the User and Society

(1 Unit)
Prerequisite: CS 171.
An examination of how computers are used and how computers fit into society. Topics include user interface design, human-centered software development and evaluation, software reliability, social context of computers, professional

and ethical responsibilities for technology professionals, intellectual property rights, privacy and civil liberties, computer crime. Offered every third year. Offered every third year. *Reimann, Staff.*

### CS 265: Database Programming

(1 Unit)
Prerequisites: CS 173 and MATH 239.
Fundamental concepts of database management systems: the relational data model, relational algebra, and normal forms, file organization and index structures, and the query language SQL and embedded SQL. Offered every third year. *Reimann, Staff.*

### CS 352: Algorithms

(1 Unit)
Prerequisites: MATH 239 and CS 171.
Focuses on the design and efficiency of algorithms. Covers the basic algorithm paradigms including graph traversals, greedy algorithms, divide and conquer, dynamic programming and flow algorithms. Introduces complexity theory, NP-completeness and polynomial-time reductions. Additional topics may include approximation algorithms, randomized algorithms and linear programming. Offered in alternate years. *Reimann.*

# Mathematics Minor

## Requirements for Minor in Mathematics

Not open to mathematics majors.

### CS 171: Introduction to Computer Science I

(1 Unit)
Prerequisite: MATH 125 (or equivalent) or permission of instructor.
Designed to be the first computer science course taken by students in mathematics and computer science. Topics include fundamentals of computation and algorithmic problem-solving, data types, control structures, the object-oriented programming paradigm and applications. Introduces a high-level programming language such as Java or Python. *Reimann.*

### MATH 299: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisite: MATH 143 or CS 173.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation and a paper on a mathematics/computer science topic of personal interest. Same as CS 299. Staff.

## Five Units in Mathematics, Including:

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH

127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### MATH 239: Discrete Structures

(1 Unit)
Prerequisite: MATH 141.
A survey of discrete mathematics with topics selected from set theory, functions and relations, number theory, combinatorics, graph theory, logic (predicate calculus, quantifiers), introduction to proof techniques, and probability. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Kamischke.*

## Plus One From:

### MATH 245: Multivariate Calculus

(1 Unit)
Prerequisite: MATH 143.
Vectors, inner and cross products, and vector-valued functions including parametric represetations of curves and surfaces in space. Partial differentiation, the chain rule, function gradients, implicit differentiation, multivariate optimization, Lagrange multipliers, multiple integrals and vector analysis, including divergence and curl of vector fields, as well as the theorems of Green, Stokes and Gauss. *Mason.*

### MATH 247: Differential Equations and Linear Algebra

(1 Unit)
Prerequisite: MATH 245.
First-order differential equations and numerical algorithms of Euler and Runge-Kutta. Linear algebraic systems, Gaussian elimination, row-echelon form matrix algebra, inverses and determinants. Vector spaces, subspaces, linear independence, bases, span, dimension, linear mappings and function spaces. Second and higher-order linear differential equations. Eigenvectors, eigenvalues and spectral decomposition methods. First-order linear differential systems, including solutions methods using matrix exponentials. Applications focus on problems in physics, chemistry, biology,

economics and engineering. Additional topics may include nonlinear dynamical systems, stability theory, transform theory and power series solutions. *Mason.*

## One From:

### MATH 331: Real Analysis

(1 Unit)
Prerequisites: MATH 245 and MATH 239.
A study of the concepts underlying calculus of a single variable: The completeness property of the real number system, convergence, continuity, properties of elementary functions, the derivative and the Riemann integral. *Bollman.*

### MATH 335: Abstract Algebra

(1 Unit)
Prerequisites: MATH 239 and MATH 247.
Properties of the integers, real number system and other familiar algebraic entities are viewed abstractly in structures such as groups, semigroups, rings and fields. Homomorphisms and isomorphisms (functions compatible with the algebraic operations) illuminate the underlying similarities among these structures. Students will develop their skills in mathematical writing and presentations. *Bollman.*

### MATH 342: Geometry

(1 Unit)
Prerequisites: MATH 143 and MATH 239.
The logical foundation of Euclidean geometry, including the axiom systems of Euclid and Hilbert, and their philosophical implications. An introduction to hyperbolic, elliptic and projective geometry. Employs software such as Geometer's Sketchpad to illustrate course topics. *Bollman.*

### MATH 349: Advanced Linear Algebra

(1 Unit)
Prerequisites: MATH 239 and MATH 247.
A continued study of linear algebra as begun in MATH 247. Topics may include abstract vector spaces, dimension, normed linear spaces, inner product spaces, canonical forms, unitary and Hermitian matrices, factorization, eigenvector analysis, and infinite-dimensional spaces. Offered in alternate years. *Bollman.*

## Other Requirements for All Mathematics Majors and Minors and Computer Science Minors

- A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course.
- While a student may begin with MATH 125 and still complete a major, it is recommended that prospective majors take a similar course in high school if at all possible.
- No course to be counted toward a major or minor in mathematics may be taken on a credit/no credit basis, except MATH 299 and MATH 399, which are only offered as credit/no credit courses.
- Students majoring or minoring in mathematics or minoring in computer science are expected to furnish the Department of Mathematics and Computer Science with information about their course work and activities related to the department. The department faculty will use this information when nominating students for

awards, scholarships and membership in professional societies, and as the basis for letters of recommendation. Students are encouraged to include this information on their personal World Wide Web pages or to develop a portfolio Web page for their activities related to their major.

# Mathematics Minor, with Education Concentration

## Requirements for Mathematics Minor with Education Concentration

Recommended:

### MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

### MATH 245: Multivariate Calculus

(1 Unit)
Prerequisite: MATH 143.
Vectors, inner and cross products, and vector-valued functions including parametric represetations of curves and surfaces in space. Partial differentiation, the chain rule, function gradients, implicit differentiation, multivariate optimization, Lagrange multipliers, multiple integrals and vector analysis, including divergence and curl of vector fields, as well as the theorems of Green, Stokes and Gauss. *Mason.*

### MATH 299: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisite: MATH 143 or CS 173.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation and a paper on a mathematics/computer science topic of personal interest. Same as CS 299. Staff.

### CS 171: Introduction to Computer Science I

(1 Unit)
Prerequisite: MATH 125 (or equivalent) or permission of instructor.
Designed to be the first computer science course taken by students in mathematics and computer science. Topics include fundamentals of computation and algorithmic problem-solving, data types, control structures, the object-oriented programming paradigm and applications. Introduces a high-level programming language such as Java or Python. *Reimann.*

## Five Units in Mathematics, Including the Three Foundation Courses:

The department may waive one or more of the foundation course requirements for students with advanced high school mathematics preparation.

## MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 239: Discrete Structures

(1 Unit)
Prerequisite: MATH 141.
A survey of discrete mathematics with topics selected from set theory, functions and relations, number theory, combinatorics, graph theory, logic (predicate calculus, quantifiers), introduction to proof techniques, and probability. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Kamischke.*

Plus:

## MATH 335: Abstract Algebra

(1 Unit)
Prerequisites: MATH 239 and MATH 247.
Properties of the integers, real number system and other familiar algebraic entities are viewed abstractly in structures such as groups, semigroups, rings and fields. Homomorphisms and isomorphisms (functions compatible with the algebraic operations) illuminate the underlying similarities among these structures. Students will develop their skills in mathematical writing and presentations. *Bollman.*

## MATH 342: Geometry

(1 Unit)
Prerequisites: MATH 143 and MATH 239.
The logical foundation of Euclidean geometry, including the axiom systems of Euclid and Hilbert, and their philosophical implications. An introduction to hyperbolic, elliptic and projective geometry. Employs software such as Geometer's Sketchpad to illustrate course topics. *Bollman.*

## Completion of Education Concentration

## Other Requirements for All Mathematics Majors and Minors and Computer Science Minors

- A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course.
- While a student may begin with MATH 125 and still complete a major, it is recommended that prospective majors take a similar course in high school if at all possible.
- No course to be counted toward a major or minor in mathematics may be taken on a credit/no credit basis, except MATH 299 and MATH 399, which are only offered as credit/no credit courses.
- Students majoring or minoring in mathematics or minoring in computer science are expected to furnish the Department of Mathematics and Computer Science with information about their course work and activities related to the department. The department faculty will use this information when nominating students for awards, scholarships and membership in professional societies, and as the basis for letters of recommendation. Students are encouraged to include this information on their personal World Wide Web pages or to develop a portfolio Web page for their activities related to their major.

# Mathematics, Actuarial Mathematics Emphasis, B.A.

## Requirements for Major in Mathematics

There are four emphases for a mathematics major, as described below. **The mathematics curriculum is highly sequential with a rigid and necessary prerequisite structure, and not all courses are offered each year**. Students planning an academic program that includes a mathematics major, especially one including teacher certification (Tracks III and IV), are urged to consult with a member of the mathematics faculty early in their Albion career so that a proper sequence of courses may be arranged.

**Failure to consider carefully the implications of course enrollment decisions may result in delayed graduation.**

## Foundation Courses

The department may waive one or more of the foundation course requirements for students with advanced high school mathematics preparation.

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in

mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## CS 171: Introduction to Computer Science I

(1 Unit)
Prerequisite: MATH 125 (or equivalent) or permission of instructor.
Designed to be the first computer science course taken by students in mathematics and computer science. Topics include fundamentals of computation and algorithmic problem-solving, data types, control structures, the object-oriented programming paradigm and applications. Introduces a high-level programming language such as Java or Python. *Reimann.*

## MATH 239: Discrete Structures

(1 Unit)
Prerequisite: MATH 141.
A survey of discrete mathematics with topics selected from set theory, functions and relations, number theory, combinatorics, graph theory, logic (predicate calculus, quantifiers), introduction to proof techniques, and probability. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Kamischke.*

## MATH 245: Multivariate Calculus

(1 Unit)
Prerequisite: MATH 143.
Vectors, inner and cross products, and vector-valued functions including parametric represetations of curves and surfaces in space. Partial differentiation, the chain rule, function gradients, implicit differentiation, multivariate optimization, Lagrange multipliers, multiple integrals and vector analysis, including divergence and curl of vector fields, as well as the theorems of Green, Stokes and Gauss. *Mason.*

## MATH 247: Differential Equations and Linear Algebra

(1 Unit)
Prerequisite: MATH 245.
First-order differential equations and numerical algorithms of Euler and Runge-Kutta. Linear algebraic systems, Gaussian elimination, row-echelon form matrix algebra, inverses and determinants. Vector spaces, subspaces, linear

independence, bases, span, dimension, linear mappings and function spaces. Second and higher-order linear differential equations. Eigenvectors, eigenvalues and spectral decomposition methods. First-order linear differential systems, including solutions methods using matrix exponentials. Applications focus on problems in physics, chemistry, biology, economics and engineering. Additional topics may include nonlinear dynamical systems, stability theory, transform theory and power series solutions. *Mason.*

# Mathematics Major with Actuarial Mathematics Emphasis

The mathematics major with actuarial mathematics emphasis leads toward immediate employment or further study in actuarial science or a related area.

## 10 Units in Mathematics and Computer Science, Including the Six Units of Foundation Courses, plus Four Additional Courses:

### MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

### MATH 311: Regression and Time Series Models

(1 Unit)
Covers two topics in detail: multiple linear regression analysis and time series analysis. Inherent to both topics: parsimonious linear models, parameter estimation, diagnostic checking, and forecasting. Uses the matrix approach for multiple linear regression, and the Box-Jenkins methodology for constructing autoregressive-integrated moving average (ARIMA) models for time series analysis. Employs the statistical package MINITAB for analyzing all real-world data sets. *Anderson.*

### MATH 313: Financial Mathematics for Actuaries

(1 Unit)
MATH 209 or MATH 309 MATH 247
Introduction to mathematics of financial derivatives in discrete time. Risk-neutral/arbitrage-free modeling of risky securities including options, forwards, futures, and swaps. Emphasis on single and multi-period Arrow-Debreu models and discrete-time stochastic processes with applications to actuarial mathematics. *Mason*

OR

### MATH 349: Advanced Linear Algebra

(1 Unit)
Prerequisites: MATH 239 and MATH 247.
A continued study of linear algebra as begun in MATH 247. Topics may include abstract vector spaces, dimension, normed linear spaces, inner product spaces, canonical forms, unitary and Hermitian matrices, factorization, eigenvector analysis, and infinite-dimensional spaces. Offered in alternate years. *Bollman.*

### MATH 331: Real Analysis

(1 Unit)
Prerequisites: MATH 245 and MATH 239.
A study of the concepts underlying calculus of a single variable: The completeness property of the real number system, convergence, continuity, properties of elementary functions, the derivative and the Riemann integral. *Bollman.*

## Mathematics Courses:

### MATH 299: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisite: MATH 143 or CS 173.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation and a paper on a mathematics/computer science topic of personal interest. Same as CS 299. Staff.

### MATH 399: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisites: MATH 299 and senior standing.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation, a departmental major assessment examination and an oral presentation on a mathematics/computer science topic of personal interest. Offered only on a credit/no credit basis. Same as CS 399. *Staff.*

## 3 Units of Cognate Courses:

### E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

### E&M 102: The Economy and Financial Markets

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the macroeconomy and macroeconomic models with special emphasis on the role of financial markets, interest rates, the Federal Reserve, monetary and fiscal policy, and money and capital markets. *Hooks, Li.*

### E&M 348: Financial Management

(1 Unit)
Prerequisite: E&M 101.
A survey course covering principles of corporate financial management. Topics include working capital management, agency theory, capital budgeting, capital structure, divided policy, financial analysis and selected topics. *Hooks.*

## Other Requirements for All Mathematics Majors and Minors and Computer Science Minors

- A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course.
- While a student may begin with MATH 125 and still complete a major, it is recommended that prospective majors take a similar course in high school if at all possible.
- No course to be counted toward a major or minor in mathematics may be taken on a credit/no credit basis, except MATH 299 and MATH 399, which are only offered as credit/no credit courses.
- Students majoring or minoring in mathematics or minoring in computer science are expected to furnish the Department of Mathematics and Computer Science with information about their course work and activities related to the department. The department faculty will use this information when nominating students for awards, scholarships and membership in professional societies, and as the basis for letters of recommendation. Students are encouraged to include this information on their personal World Wide Web pages or to develop a portfolio Web page for their activities related to their major.

# Mathematics, B.A.

## Requirements for Major in Mathematics

There are four emphases for a mathematics major, as described below. **The mathematics curriculum is highly sequential with a rigid and necessary prerequisite structure, and not all courses are offered each year**. Students planning an academic program that includes a mathematics major, especially one including teacher certification (Tracks III and IV), are urged to consult with a member of the mathematics faculty early in their Albion career so that a proper sequence of courses may be arranged.

**Failure to consider carefully the implications of course enrollment decisions may result in delayed graduation.**

## Foundation Courses

The department may waive one or more of the foundation course requirements for students with advanced high school mathematics preparation.

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### CS 171: Introduction to Computer Science I

(1 Unit)
Prerequisite: MATH 125 (or equivalent) or permission of instructor.
Designed to be the first computer science course taken by students in mathematics and computer science. Topics include fundamentals of computation and algorithmic problem-solving, data types, control structures, the object-oriented programming paradigm and applications. Introduces a high-level programming language such as Java or Python. *Reimann.*

### MATH 239: Discrete Structures

(1 Unit)
Prerequisite: MATH 141.
A survey of discrete mathematics with topics selected from set theory, functions and relations, number theory, combinatorics, graph theory, logic (predicate calculus, quantifiers), introduction to proof techniques, and probability. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Kamischke.*

### MATH 245: Multivariate Calculus

(1 Unit)
Prerequisite: MATH 143.
Vectors, inner and cross products, and vector-valued functions including parametric represetations of curves and surfaces in space. Partial differentiation, the chain rule, function gradients, implicit differentiation, multivariate optimization, Lagrange multipliers, multiple integrals and vector analysis, including divergence and curl of vector fields, as well as the theorems of Green, Stokes and Gauss. *Mason.*

### MATH 247: Differential Equations and Linear Algebra

(1 Unit)
Prerequisite: MATH 245.
First-order differential equations and numerical algorithms of Euler and Runge-Kutta. Linear algebraic systems, Gaussian elimination, row-echelon form matrix algebra, inverses and determinants. Vector spaces, subspaces, linear independence, bases, span, dimension, linear mappings and function spaces. Second and higher-order linear differential equations. Eigenvectors, eigenvalues and spectral decomposition methods. First-order linear differential systems, including solutions methods using matrix exponentials. Applications focus on problems in physics, chemistry, biology, economics and engineering. Additional topics may include nonlinear dynamical systems, stability theory, transform theory and power series solutions. *Mason.*

## Mathematics Major

The mathematics major leads toward immediate employment, graduate work in the mathematical sciences, or professional study in other fields.

## 10 Units in Mathematics and Computer Science, Including Six Units of Foundation Courses, plus Four Additional Courses:

### MATH 331: Real Analysis

(1 Unit)
Prerequisites: MATH 245 and MATH 239.
A study of the concepts underlying calculus of a single variable: The completeness property of the real number system, convergence, continuity, properties of elementary functions, the derivative and the Riemann integral. *Bollman*.

### MATH 335: Abstract Algebra

(1 Unit)
Prerequisites: MATH 239 and MATH 247.
Properties of the integers, real number system and other familiar algebraic entities are viewed abstractly in structures such as groups, semigroups, rings and fields. Homomorphisms and isomorphisms (functions compatible with the algebraic operations) illuminate the underlying similarities among these structures. Students will develop their skills in mathematical writing and presentations. *Bollman*.

## Two Additional Units of Mathematics Course Work at the 300-level

Students contemplating graduate study in mathematics should also take as many other 300-level mathematics courses as their schedules will allow, as well as course work in French, German or Russian.

## Mathematics Courses:

### MATH 299: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisite: MATH 143 or CS 173.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation and a paper on a mathematics/computer science topic of personal interest. Same as CS 299. Staff.

### MATH 399: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisites: MATH 299 and senior standing.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation, a departmental major assessment examination and an oral presentation on a mathematics/computer science topic of personal interest. Offered only on a credit/no credit basis. Same as CS 399. *Staff*.

## Students Interested in Pure Mathematics Are Encouraged to Select Elective Courses From:

## MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

## MATH 333: Complex Analysis

(1 Unit)
Prerequisites: MATH 239 and MATH 245.
An introduction to complex variable theory. Specific topics to be covered include elementary and analytic functions, differentiation and integration in the complex plane, series representations, residues and poles, transform theory, and conformal mapping. Offered in alternate years. *Bollman.*

## MATH 342: Geometry

(1 Unit)
Prerequisites: MATH 143 and MATH 239.
The logical foundation of Euclidean geometry, including the axiom systems of Euclid and Hilbert, and their philosophical implications. An introduction to hyperbolic, elliptic and projective geometry. Employs software such as Geometer's Sketchpad to illustrate course topics. *Bollman.*

## MATH 345: History of Mathematics

(1 Unit)
Prerequisite: MATH 141.
A study of the history and evolution of mathematical ideas and their significance, from approximately 3500 B.C.E. to the present. Topics include number systems, arithmetic, Euclidean and non-Euclidean geometry, algebra, calculus, probability, number theory and applied mathematics. Offered in alternate years. *Bollman.*

## MATH 349: Advanced Linear Algebra

(1 Unit)
Prerequisites: MATH 239 and MATH 247.
A continued study of linear algebra as begun in MATH 247. Topics may include abstract vector spaces, dimension, normed linear spaces, inner product spaces, canonical forms, unitary and Hermitian matrices, factorization, eigenvector analysis, and infinite-dimensional spaces. Offered in alternate years. *Bollman.*

# While Students Interested in Applied Mathematics Should Select Courses From:

## MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

## MATH 311: Regression and Time Series Models

(1 Unit)
Covers two topics in detail: multiple linear regression analysis and time series analysis. Inherent to both topics: parsimonious linear models, parameter estimation, diagnostic checking, and forecasting. Uses the matrix approach for multiple linear regression, and the Box-Jenkins methodology for constructing autoregressive-integrated moving average (ARIMA) models for time series analysis. Employs the statistical package MINITAB for analyzing all real-world data sets. *Anderson.*

## MATH 316: Numerical Analysis

(1 Unit)
Prerequisites: MATH 247 and CS 171.
Methods of obtaining numerical solutions to mathematical problems. Stresses the implementation and error analysis of algorithms. Topics include solution of non-linear equations, systems of equations, interpolating polynomials, numerical integration and differentiation, numerical solution to ordinary differential equations, and curve fitting. Offered in alternate years. Same as CS 316. *Mason.*

## MATH 326: Operations Research

(1 Unit)
Prerequisites: MATH 247.
An introduction to computational methods in mathematical modeling including linear programming and Markov chains. Applications in business, economics and systems engineering. Knowledge of probability is helpful. Offered in alternate years. Same as CS 326. *Mason.*

## MATH 333: Complex Analysis

(1 Unit)
Prerequisites: MATH 239 and MATH 245.
An introduction to complex variable theory. Specific topics to be covered include elementary and analytic functions, differentiation and integration in the complex plane, series representations, residues and poles, transform theory, and conformal mapping. Offered in alternate years. *Bollman.*

## MATH 349: Advanced Linear Algebra

(1 Unit)
Prerequisites: MATH 239 and MATH 247.
A continued study of linear algebra as begun in MATH 247. Topics may include abstract vector spaces, dimension, normed linear spaces, inner product spaces, canonical forms, unitary and Hermitian matrices, factorization, eigenvector analysis, and infinite-dimensional spaces. Offered in alternate years. *Bollman.*

## MATH 360: Mathematical Modeling

(1 Unit)
Prerequisites: MATH 247 and CS 171.
An introduction to analytical methods in mathematical modeling, including nonlinear optimization, dynamical systems and random processes. Applications in physics, biology, economics and systems engineering. Knowledge of probability and statistics is helpful. Same as CS 360. *Mason.*

### MATH 370: Partial Differential Equations

(1 Unit)
Prerequisites: MATH 239 and MATH 247.
MATH 331 recommended. A study of the theory and applications of partial differential equations (PDEs). Linear and nonlinear PDEs, including quasilinear first order equations, conservation laws, discontinuous solutions, classification of PDEs, wave propagation in multiple space dimensions, Fourier analysis and separation of variables, Sturm-Liouville theory, fundamental solutions for equations of parabolic and elliptic type, including the maximum principle. Applications in biology, chemistry, engineering and physics. Offered in alternate years. *Mason.*

### MATH 380: Mathematical Physics

(1 Unit)
Same as PHYS 380. *Staff.*

## Other Requirements for All Mathematics Majors and Minors and Computer Science Minors

- A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course.
- While a student may begin with MATH 125 and still complete a major, it is recommended that prospective majors take a similar course in high school if at all possible.
- No course to be counted toward a major or minor in mathematics may be taken on a credit/no credit basis, except MATH 299 and MATH 399, which are only offered as credit/no credit courses.
- Students majoring or minoring in mathematics or minoring in computer science are expected to furnish the Department of Mathematics and Computer Science with information about their course work and activities related to the department. The department faculty will use this information when nominating students for awards, scholarships and membership in professional societies, and as the basis for letters of recommendation. Students are encouraged to include this information on their personal World Wide Web pages or to develop a portfolio Web page for their activities related to their major.

# Mathematics, with Education Concentration, B.A.

## Requirements for Major in Mathematics

There are four emphases for a mathematics major, as described below. **The mathematics curriculum is highly sequential with a rigid and necessary prerequisite structure, and not all courses are offered each year**. Students planning an academic program that includes a mathematics major, especially one including teacher certification (Tracks III and IV), are urged to consult with a member of the mathematics faculty early in their Albion career so that a proper sequence of courses may be arranged.

**Failure to consider carefully the implications of course enrollment decisions may result in delayed graduation.**

## Foundation Courses

The department may waive one or more of the foundation course requirements for students with advanced high school mathematics preparation.

## MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## CS 171: Introduction to Computer Science I

(1 Unit)
Prerequisite: MATH 125 (or equivalent) or permission of instructor.
Designed to be the first computer science course taken by students in mathematics and computer science. Topics include fundamentals of computation and algorithmic problem-solving, data types, control structures, the object-oriented programming paradigm and applications. Introduces a high-level programming language such as Java or Python. *Reimann.*

## MATH 239: Discrete Structures

(1 Unit)
Prerequisite: MATH 141.
A survey of discrete mathematics with topics selected from set theory, functions and relations, number theory, combinatorics, graph theory, logic (predicate calculus, quantifiers), introduction to proof techniques, and probability. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Kamischke.*

## MATH 245: Multivariate Calculus

(1 Unit)
Prerequisite: MATH 143.
Vectors, inner and cross products, and vector-valued functions including parametric represetations of curves and surfaces in space. Partial differentiation, the chain rule, function gradients, implicit differentiation, multivariate optimization, Lagrange multipliers, multiple integrals and vector analysis, including divergence and curl of vector fields, as well as the theorems of Green, Stokes and Gauss. *Mason.*

### MATH 247: Differential Equations and Linear Algebra

(1 Unit)
Prerequisite: MATH 245.
First-order differential equations and numerical algorithms of Euler and Runge-Kutta. Linear algebraic systems, Gaussian elimination, row-echelon form matrix algebra, inverses and determinants. Vector spaces, subspaces, linear independence, bases, span, dimension, linear mappings and function spaces. Second and higher-order linear differential equations. Eigenvectors, eigenvalues and spectral decomposition methods. First-order linear differential systems, including solutions methods using matrix exponentials. Applications focus on problems in physics, chemistry, biology, economics and engineering. Additional topics may include nonlinear dynamical systems, stability theory, transform theory and power series solutions. *Mason.*

## Requirements for Mathematics Major with Education Concentration

## 10 Units in Mathematics and Computer Science, Including the Six Foundation Courses, Plus:

### MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

### MATH 331: Real Analysis

(1 Unit)
Prerequisites: MATH 245 and MATH 239.
A study of the concepts underlying calculus of a single variable: The completeness property of the real number system, convergence, continuity, properties of elementary functions, the derivative and the Riemann integral. *Bollman.*

### MATH 335: Abstract Algebra

(1 Unit)
Prerequisites: MATH 239 and MATH 247.
Properties of the integers, real number system and other familiar algebraic entities are viewed abstractly in structures such as groups, semigroups, rings and fields. Homomorphisms and isomorphisms (functions compatible with the algebraic operations) illuminate the underlying similarities among these structures. Students will develop their skills in mathematical writing and presentations. *Bollman.*

### MATH 342: Geometry

(1 Unit)
Prerequisites: MATH 143 and MATH 239.
The logical foundation of Euclidean geometry, including the axiom systems of Euclid and Hilbert, and their philosophical implications. An introduction to hyperbolic, elliptic and projective geometry. Employs software such as Geometer's Sketchpad to illustrate course topics. *Bollman.*

## Completion of Education Concentration

## Other Requirements for All Mathematics Majors and Minors and Computer Science Minors

- A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course.
- While a student may begin with MATH 125 and still complete a major, it is recommended that prospective majors take a similar course in high school if at all possible.
- No course to be counted toward a major or minor in mathematics may be taken on a credit/no credit basis, except MATH 299 and MATH 399, which are only offered as credit/no credit courses.
- Students majoring or minoring in mathematics or minoring in computer science are expected to furnish the Department of Mathematics and Computer Science with information about their course work and activities related to the department. The department faculty will use this information when nominating students for awards, scholarships and membership in professional societies, and as the basis for letters of recommendation. Students are encouraged to include this information on their personal World Wide Web pages or to develop a portfolio Web page for their activities related to their major.

# Mathematics, with Elementary Education Certification, B.A.

## Requirements for Major in Mathematics

There are four emphases for a mathematics major, as described below. **The mathematics curriculum is highly sequential with a rigid and necessary prerequisite structure, and not all courses are offered each year**. Students planning an academic program that includes a mathematics major, especially one including teacher certification (Tracks III and IV), are urged to consult with a member of the mathematics faculty early in their Albion career so that a proper sequence of courses may be arranged.

**Failure to consider carefully the implications of course enrollment decisions may result in delayed graduation.**

## Foundation Courses

The department may waive one or more of the foundation course requirements for students with advanced high school mathematics preparation.

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## CS 171: Introduction to Computer Science I

(1 Unit)
Prerequisite: MATH 125 (or equivalent) or permission of instructor.
Designed to be the first computer science course taken by students in mathematics and computer science. Topics include fundamentals of computation and algorithmic problem-solving, data types, control structures, the object-oriented programming paradigm and applications. Introduces a high-level programming language such as Java or Python. *Reimann.*

## MATH 239: Discrete Structures

(1 Unit)
Prerequisite: MATH 141.
A survey of discrete mathematics with topics selected from set theory, functions and relations, number theory, combinatorics, graph theory, logic (predicate calculus, quantifiers), introduction to proof techniques, and probability. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Kamischke.*

## MATH 245: Multivariate Calculus

(1 Unit)
Prerequisite: MATH 143.
Vectors, inner and cross products, and vector-valued functions including parametric represetations of curves and surfaces in space. Partial differentiation, the chain rule, function gradients, implicit differentiation, multivariate optimization, Lagrange multipliers, multiple integrals and vector analysis, including divergence and curl of vector fields, as well as the theorems of Green, Stokes and Gauss. *Mason.*

## MATH 247: Differential Equations and Linear Algebra

(1 Unit)
Prerequisite: MATH 245.
First-order differential equations and numerical algorithms of Euler and Runge-Kutta. Linear algebraic systems, Gaussian elimination, row-echelon form matrix algebra, inverses and determinants. Vector spaces, subspaces, linear independence, bases, span, dimension, linear mappings and function spaces. Second and higher-order linear differential equations. Eigenvectors, eigenvalues and spectral decomposition methods. First-order linear differential systems, including solutions methods using matrix exponentials. Applications focus on problems in physics, chemistry, biology, economics and engineering. Additional topics may include nonlinear dynamical systems, stability theory, transform theory and power series solutions. *Mason.*

# Requirements for Mathematics Major with Elementary Education Certification

### MATH 299: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisite: MATH 143 or CS 173.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation and a paper on a mathematics/computer science topic of personal interest. Same as CS 299. Staff.

### MATH 399: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisites: MATH 299 and senior standing.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation, a departmental major assessment examination and an oral presentation on a mathematics/computer science topic of personal interest. Offered only on a credit/no credit basis. Same as CS 399. *Staff.*

# 10 Units in Mathematics and Computer Science, Including the Six Foundation Courses, Plus:

### MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

### MATH 335: Abstract Algebra

(1 Unit)
Prerequisites: MATH 239 and MATH 247.
Properties of the integers, real number system and other familiar algebraic entities are viewed abstractly in structures such as groups, semigroups, rings and fields. Homomorphisms and isomorphisms (functions compatible with the algebraic operations) illuminate the underlying similarities among these structures. Students will develop their skills in mathematical writing and presentations. *Bollman.*

### MATH 342: Geometry

(1 Unit)
Prerequisites: MATH 143 and MATH 239.
The logical foundation of Euclidean geometry, including the axiom systems of Euclid and Hilbert, and their philosophical implications. An introduction to hyperbolic, elliptic and projective geometry. Employs software such as Geometer's Sketchpad to illustrate course topics. *Bollman.*

### MATH 345: History of Mathematics

(1 Unit)
Prerequisite: MATH 141.
A study of the history and evolution of mathematical ideas and their significance, from approximately 3500 B.C.E. to the present. Topics include number systems, arithmetic, Euclidean and non-Euclidean geometry, algebra, calculus, probability, number theory and applied mathematics. Offered in alternate years. *Bollman.*

## Completion of All Other Requirements for Teacher Certification

Elementary Concentration

## Other Requirements for All Mathematics Majors and Minors and Computer Science Minors

- A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course.
- While a student may begin with MATH 125 and still complete a major, it is recommended that prospective majors take a similar course in high school if at all possible.
- No course to be counted toward a major or minor in mathematics may be taken on a credit/no credit basis, except MATH 299 and MATH 399, which are only offered as credit/no credit courses.
- Students majoring or minoring in mathematics or minoring in computer science are expected to furnish the Department of Mathematics and Computer Science with information about their course work and activities related to the department. The department faculty will use this information when nominating students for awards, scholarships and membership in professional societies, and as the basis for letters of recommendation. Students are encouraged to include this information on their personal World Wide Web pages or to develop a portfolio Web page for their activities related to their major.

# Statistics Minor

## Requirements for Minor in Statistics

Not open to mathematics majors.

### MATH 299: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisite: MATH 143 or CS 173.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation and a paper on a mathematics/computer science topic of personal interest. Same as CS 299. Staff.

## Six Units in Mathematics, Including:

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.

MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

## MATH 245: Multivariate Calculus

(1 Unit)
Prerequisite: MATH 143.
Vectors, inner and cross products, and vector-valued functions including parametric represetations of curves and surfaces in space. Partial differentiation, the chain rule, function gradients, implicit differentiation, multivariate optimization, Lagrange multipliers, multiple integrals and vector analysis, including divergence and curl of vector fields, as well as the theorems of Green, Stokes and Gauss. *Mason.*

## MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

## MATH 311: Regression and Time Series Models

(1 Unit)
Covers two topics in detail: multiple linear regression analysis and time series analysis. Inherent to both topics: parsimonious linear models, parameter estimation, diagnostic checking, and forecasting. Uses the matrix approach for

multiple linear regression, and the Box-Jenkins methodology for constructing autoregressive-integrated moving average (ARIMA) models for time series analysis. Employs the statistical package MINITAB for analyzing all real-world data sets. *Anderson.*

# Modern Languages and Cultures

# Faculty

**Dianne P. Guenin-Lelle**, professor, and Chair
B.A., University of New Orleans; M.A., University of Louisiana, Lafayette; Ph.D., Louisiana State University. Appointed 1987.

**Elizabeth Barrios,** assistant professor
B.A., English Literature and Spanish, Knox College, Galesburg, Illinois. Ph.D., Romance Languages and Literature (Spanish), University of Michigan. Appointed 2016

**Perry W. Myers**, professor.
B.A., M.B.A., Baylor University; M.A., Ph.D., University of Texas, Austin. Appointed 2004.

**Marcie A. Noble**, staff lecturer.
B.A., M.A., Ph.D., Western Michigan University. Appointed 2009.

**Kalen R. Oswald**, associate professor.
B.A., Utah State University; M.A., Ph.D., University of Arizona. Appointed 2002.

**Emmanuel T. Yewah**, professor.
Licencié-es-Lettres, Maîtrise, Université de Yaoundé; M.A., Ph.D., University of Michigan. Appointed 1986.

# Introduction

A student of modern languages and cultures at Albion can major in French, German or Spanish. A modern language major or minor will engage authentically and adapt to new cultures with ease, communicating effectively in the target language. Professors and Native Speaker Teaching Assistants enjoy working with students in class and in the I-Space Residence (Fiske House).

# Special Features

The I-Space is a living and learning residence hall where language students live in community along with Native Speaker Teaching Assistants. There are weekly cultural activities, language tables, film series and other special events in I-Space.

Students are encouraged to take full advantage of the off-campus programs and other international experiences offered at Albion College.

**Departmental Policy on Advanced Placement Credit and Placement**

Students may obtain college credit according to their scores on a standardized Advanced Placement (AP) language examination administered at their high schools. A score of 3 merits one-half unit, a 4 merits one unit and a 5 merits one and one-half units of credit at Albion College. A maximum of one unit may be applied toward a major or minor in French, German or Spanish.

Before Student Orientation and during the first week of fall semester, the department administers an online placement test for students with prior study of French, German or Spanish. Students with two or more years of high school modern language course work are expected to take the placement test before enrolling in language courses at Albion. This test does not give college credit; its purpose is to place such students at the appropriate level.

# Student Learning Outcomes
# Majors

**For major in Language and Culture for the Professions in French, German or Spanish:**

1. Students will be able to explain their ideas in the target language at the advance-low level (ACTFL Proficiency Guidelines).

2. Students will be able to demonstrate intercultural competency in professional practices in the target professional culture.

3. Students will be able to recognize and differentiate areas in the world where the target language is spoken.

4. Students will be able to differentiate authentic cultural artifacts from areas where the target language is spoken.

5. Students will be able to evaluate salient socio-historical moments in appropriate cultural contexts.

6. Students will be able to apply linguistic and cultural competence during an internship in the target country.

**For major in French, German or Spanish:**

1. Students will be able to explain their ideas in the target language at the advanced-low level (ACTFL Proficiency Guidelines).

2. Students will be able to demonstrate intercultural competency specific to target cultures, especially mindful of current globalization issues.

3. Students will be able to recognize and differentiate areas in the world where the target language is spoken.

4. Students will be able to differentiate authentic cultural artifacts from areas where the target language is spoken.

5. Students will be able to evaluate salient socio-historical moments in appropriate cultural contexts.

**For major in French, German or Spanish with Secondary or K-12 Education Certification:**

1. Students will be able to explain their ideas in the target language at the advanced-low level (ACTFL Proficiency Guidelines).

2. Students will be able to demonstrate intercultural competency specific to target cultures, especially mindful of current globalization issues.

3. Students will be able to recognize and differentiate areas in the world where the target language is spoken.

4. Students will be able to differentiate authentic cultural artifacts from areas where the target language is spoken.

5. Students will be able to evaluate salient socio-historical moments in appropriate cultural contexts.

**For major in TransAmerican Latino/a Studies:**

1. Students will be able to explain their ideas in the target language at the advanced-low level (ACTFL Proficiency Guidelines).

2. Students will be able to demonstrate intercultural competency specific to target cultures, especially mindful of current globalization issues.

3. Students will be able to examine the changing roles of U.S.- Latin American relations as they relate to cultural exchange, political intervention, and migration.

4. Students will be able to differentiate authentic cultural artifacts from areas where the target language is spoken.

5. Students will be able to apply social construction and contingency theory in their analysis of Latin American and US Latinx communities.

# Minors

**For minor in Language and Culture for the Professions in French, German, or Spanish:**

1. Students will be able to explain their ideas in the target language at the intermediate-high level (ACTFL Proficiency Guidelines).

2. Students will be able to demonstrate intercultural competency in professional practices in the target professional culture.

3. Students will be able to recognize and differentiate areas in the world where the target language is spoken.

4. Students will be able to differentiate authentic cultural artifacts from areas where the target language is spoken.

5. Students will be able to apply linguistic and cultural competence during an internship in the target country.

**For minor in French, German or Spanish:**

1. Students will be able to explain thier ideas in the target language at the intermediate-high level (ACTFL Proficiency guidelines).

2. Students will be able to demonstrate intercultural competency specific to target cultures, especially mindful of current globalization issues.

3. Students will be able to recognize and differentiate areas in the world where the target language is spoken.

4. Students will be able to differentiate authentic cultural artifacts from areas where the target language is spoken.

**For minor in French, German or Spanish with Secondary or K-12 Education Certification:**

1. Students will be able to explain their ideas in the target language at the intermediate-high level (ACTFL Proficiency Guidelines).

2. Students will be able to demonstrate intercultural competency specific to target cultures, especially mindful of current globalization issues.

3. Students will be able to recognize and differentiate areas in the world where the target language is spoken.

4. Students will be able to differentiate authentic cultural artifacts from areas where the target language is spoken.

**For minor in TransAmerican Latino/a Studies:**

1. Students will be able to explain their ideas in the target language at the intermediate-high level (ACTFL Proficiency Guidelines).

2. Students will be able to demonstrate intercultural competency specific to target cultures, especially mindful of current globalization issues.

3. Students will be able to examine the changing roles of U.S.- Latin American relations as they relate to cultural exchange, political intervention, and migration.

4. Students will be able to apply social construction and contingency theory in their analysis of Latin American and US Latinx communities.

# Majors and Minors

## Requirements for Major

In most cases a major may be earned in French, German or Spanish by completing:

A minimum of eight units of study at the 200-level or higher; or nine units beginning at the 101 level. See below for specific details on the different major tracks in each language. Only one unit of Advanced Placement credit can count toward a major or minor. Students interested in pursuing language study are invited to meet with a faculty member to discuss their interests and the program offerings. Off-campus study in an approved study abroad program is required for all majors, and highly recommended for minors. (In the Language and Culture for the Professions minor, an internship abroad or a documented internship-like experience is required.) If a student cannot travel outside of the country, they should talk to the department chair to discuss other options.

All majors are required to have at least one semester of residence in the I-Space language-learning housing and credit for Modern Languages and Cultures 110. If circumstances prevent a student from living in the I-Space, then the student must consult with the department chair.

It is recommended that all majors take cognate courses, for example in English, history, anthropology and sociology, relating to their language of study. Double majors are also encouraged.

## Spanish: Latin American and Latino/a Studies Minor

The minor must be completed by a minimum of six units of study at the 201-level or higher.

At least 1 Spanish Class that deals with Latinos in the United States.

These are the current offerings:

### SPAN 300: Spanish for Heritage Speakers

(1 Unit)
Prerequisite: Determined by Placement Exam or Instructor's Permission
The course is designed for students who were raised in a home where Spanish is spoken, who speak or understand Spanish, and are to some degree bilingual in English and Spanish. The course will include composition and conversation, with a focus on aspects of grammar and vocabulary that are of particular interest to heritage learners. Assignments will be based on a variety of readings about contemporary issues of importance to the Spanish-speaking world. Conducted in Spanish. Lecture *Staff*

### SPAN 307: Cultural Encounters: Caribbean, Central and North America

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
Examines past, present and future struggles of cultural encounters and production in the Spanish-speaking Caribbean, Mexico and Central America. Explores cultural artifacts such as music, visual arts, performance arts, literature, popular culture and folklore from the legacy of the pre-Columbian period to the twenty-first century and considers this region's growing interaction with the United States. Conducted in Spanish. *Staff.*

### SPAN 362: Latinx Literature and Cultures in the United States

(1 Unit)
Proficiency Expected level of proficiency: SPAN 307 or SPAN 314 or SPAN 315, or permission of instructor.
Analysis of a special problem, topic, issue, phenomenon, period, author, genre or movement in U.S. Latino or Chicano literature and/or culture from its beginning to the present. Conducted in Spanish. *Staff.*

### SPAN 372: Afro-Latinx: TransAmerican Identities and Histories

(1 unit)
Proficiency Expected Level of proficiency - SPAN 306 or 307, or permission of instructor.
This course examines the black experience in Latin America, beginning with the TransAtlantic Slave Trade, up to contemporary social movements in the United States, Venezuela, Colombia, Cuba, Brazil, and the island of La Hispaniola (the Dominican Republic and Haiti). The content of the course will include literature, film, and music in Spanish, or translated to English from Haitian Creole and Portuguese. *Barrios*

## The remaining units to the minor must be selected from Spanish classes at or above the 201-level.

Additional Requirements:

Participation in language-learning housing for at least one semester and successful completion of MLAC 110.

## Electives for Heritage Speakers:

Native Speakers or students placing into Spanish 300: Spanish for Heritage Speakers (for students who grew up in a Spanish-speaking household or community) during thier first year, have the option to take up to 1 elective outside the department. Some possible offerings include:

### ANTH 256: Native North America

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or ETHN 103 or permission of instructor.

The historical and anthropological study of Native peoples of North America, with an emphasis on the twentieth century. Topics include federal policy, political movements, gender, the construction of identities and relationships between scholars and Native communities. Same as HIST 256. *Staff.*

## ANTH 320: Indigenous Peoples of Latin America

(1 Unit)
This course surveys the cultural diversity of contemproary indigenous peoples living in Latin America. It traces how indigenous cultural traditions and societies have both continues and changed since through European conquest, colonialism, and statehood. The course emphasizes language rights, territorial rights, sovereignty, and state violence through the lens of anthropology. *Webb.*

## EDUC 338: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Humanities

(1/2 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in English and world languages (French, German and Spanish) in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke, Shanton.*

## EDUC 339: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Humanities

(1 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in English and world languages (French, German and Spanish) in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke, Shanton.*

## ETHN 370: Theories and Methods in Ethnic Studies

(1 Unit)
Prerequisite: ETHN 103 or permission of instructor.
Designed as a capstone course to integrate students' Internship and course work experiences and deepen their analytical understanding of issues related to race/ethnicity. Examines the development of ethnic and race relations, ethnic and race discrimination, and American identity using different multicultural theoretical perspectives. Includes field work and/or other research on a topic related to race/ethnicity. *Staff.*

## HIST 371: Latin American-U.S. Relations

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Explores essential elements that have shaped U.S. influence in Latin America from the 1820s to the present day, examining official policy as well as ideology, cultural representations, the media and trade issues. Considers this history from multiple perspectives, looking north and looking south, and how notions of race, religion and gender have played into inter-American relations. Analysis of primary source materials is integral. *Staff*

## HIST 300: Slave Societies of the Americas

(1 Unit)
Prerequisite: enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Comparative study of the development of race-based slavery in Spanish America, Brazil, the Caribbean and the U.S. South. Discusses the Middle Passage, plantation life, slave religion, resistance, emancipation and its aftermath. Invites students to consider the history of ethnic relations within multiracial societies. *Staff*

### HIST 301: Gender in Latin American History

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
how have conquest, race mixture, nation-building, consumer culture, and immigration impacted Latin American women and men? This seminar examines the lives of indigenous peasents, African slaves, Spanish nuns and priests, sorceresses, movie stars, and mothers and fathers throughout the Americas. *Staff*

### HIST 270: Latin American Immigration and the U.S.

(1 Unit)
Why do Latin Americans leave their countries? What are their experiences of entering and living in the U.S.? How has their emigration impacted both their homelands and U.S. society? Emphasis on Mexicans, Cubans, and Puerto Ricans in the twentieth century and the development of new "Latino" identities. *Kanter*.

### HIST 142: Modern Latin America History

(1 Unit)
An introduction to Latin America from independence in the 1820s to the present. Native Americans, slaves and European immigrants struggled with elites to form societies of "order and progress." Films and oral histories show how the world economy affected working men and women and their responses: revolutions, religion, nationalism and popular politics. *Kanter*.

### MLAC 207: Race, Ethnicity and Diaspora in Latin America and the United States

(1 Unit)
This course explores the interconnected histories and cultures of Latin American nations and the United States. Special attention will be paid to the history, artistic production, and political movements of Indigenous populations, the African Diaspora, and immigrant groups throughout the Americas. *Staff.*

### RS 270: Liberation Theology

(1 Unit)
Examines Christian theological responses to poverty and social injustice emphasizing the theme of liberation. Includes analysis of liberation theology in 1960s Latin America and its influence on African American and feminist theologies in the U.S. Offered occasionally. *Mourad.*

Courses not listed here can be approved upon consultation with the department chair.

# French Language and Culture for the Professions Minor

# Requirements for Minor in French Language and Culture for the Professions

- An internship abroad or a documented internship-like experience abroad that has been approved by the MLAC Department.
- A maximum of one unit of Advanced Placement credit can count toward the minor.
- Residence in language-learning housing for at least one semester and successful completion of MLAC 110.

## A Minimum of Six Units, Including:

### MLAC 305: Intercultural Understanding and Global Issues

(1 Unit)
Explores theoretical models of how cultures are derived and what it means to interact across cultural boundaries. Applies these theoretical models to selected global issues in order to demonstrate the potentialities and hazards of negotiation of global issues across borders. Useful for pre-professional students who want to attain the skills and knowledge to effectively function in an international/intercultural context. Taught in English. *Myers*

**OR**

### FREN 303: French for the Professions

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent.
Offers insights on the French and other French-speaking countries' work environment and the specialized knowledge necessary to communicate effectively in specific professions. Conducted in French. *Guenin-Lelle, Yewah.*

with permission of the department

### FREN 201: Environment in the French-Speaking World: changing theme

(1 Unit)
Proficiency Expected level of proficiency; FREN 101 or above or appropriate score on departmental placement test. Exploring current environmental themes important in the French-speaking world in the French language 9listening, speaking, reading and writing). Themes change each semester. *Guenin-Lelle, Yewah.*

### FREN 202: Gender in the French-Speaking World: changing theme

(1 Unit)
Proficiency Expected level of proficiency: FREN 101 or above or appropriate score on departmental placement test. Exploring current themes of gender and sexuality important in the French-speaking world in the French language (listening, speaking, reading and writing). Themes change each semester. *Guenin-Lelle, Yewah.*

### FREN 301: Advanced Oral and Written Expression I

(1 Unit)
Proficiency Expected level of proficiency: FREN 202, equivalent or appropriate score on departmental placement test. Development of communication skills in French relative to grammar, syntax, appropriate registers, necessary vocabulary, non-verbal communication and culturally specific idiomatic usage. Also includes the processes of conversation development, thesis formation and strategies for argumentation within French cultural norms, as well as key contemporary issues of importance in the French-speaking world. Conducted in French. *Guenin-Lelle, Yewah.*

or equivalent

- FREN 303: French for the Professions
- and the remaining unit selected from 300- or 400-level French courses

# French Language and Culture for the Professions, B.A.

## Requirements for Major in French Language and Culture for the Professions

As the world continues to become increasingly diverse across traditional borders and cultural boundaries, there will be more demand in the workplace and for communities to effectively negotiate otherness--different ways of living lives--which will directly impact professional practices.

Knowledge of a modern language and culture will continue to grow in importance as a foundation for functioning successfully in a global economy across many professions. This track in French is intended for those students who are pursuing preprofessional studies in fields such as economics and management, communication studies, science or public policy, among others, or for those students who are pursuing more traditional liberal arts fields and wish to add a practical component to their education. This track will provide a combination of preprofessional courses in the target language and cultural courses in order to prepare students for working in a culturally diverse world and economy. Students will be expected to attain high linguistic competence.

**Qualified students may choose a "fast track" language program at an** ***approved*** **summer institution domestically or a language/internship program abroad during the summer after their freshman year. To qualify for this special program, a student must complete an interview to be conducted by the Department of Modern Languages and Cultures.** For information about College policies on transfer credit, see the section of this catalog entitled General Academic Regulations.

## The Specific Requirements for the Major Are:

- An internship abroad or a documented internship-like experience abroad that has been approved by the MLAC Department.
- A maximum of one unit of Advanced Placement credit can count toward the major.
- Residence in language-learning housing for at least one semester and successful completion of MLAC 110.

## A Minimum of Nine Units, Including:

The seminar must be taken after all other requirements have been met or in the final semester of completion of the major requirements.

### MLAC 305: Intercultural Understanding and Global Issues

(1 Unit)
Explores theoretical models of how cultures are derived and what it means to interact across cultural boundaries. Applies these theoretical models to selected global issues in order to demonstrate the potentialities and hazards of negotiation of global issues across borders. Useful for pre-professional students who want to attain the skills and knowledge to effectively function in an international/intercultural context. Taught in English. *Myers*

### FREN 201: Environment in the French-Speaking World: changing theme

(1 Unit)
Proficiency Expected level of proficiency; FREN 101 or above or appropriate score on departmental placement test. Exploring current environmental themes important in the French-speaking world in the French language 9listening, speaking, reading and writing). Themes change each semester. *Guenin-Lelle, Yewah.*

### FREN 202: Gender in the French-Speaking World: changing theme

(1 Unit)
Proficiency Expected level of proficiency: FREN 101 or above or appropriate score on departmental placement test. Exploring current themes of gender and sexuality important in the French-speaking world in the French language (listening, speaking, reading and writing). Themes change each semester. *Guenin-Lelle, Yewah.*

### FREN 301: Advanced Oral and Written Expression I

(1 Unit)
Proficiency Expected level of proficiency: FREN 202, equivalent or appropriate score on departmental placement test. Development of communication skills in French relative to grammar, syntax, appropriate registers, necessary vocabulary, non-verbal communication and culturally specific idiomatic usage. Also includes the processes of conversation development, thesis formation and strategies for argumentation within French cultural norms, as well as key contemporary issues of importance in the French-speaking world. Conducted in French. *Guenin-Lelle, Yewah.*

### FREN 303: French for the Professions

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent.
Offers insights on the French and other French-speaking countries' work environment and the specialized knowledge necessary to communicate effectively in specific professions. Conducted in French. *Guenin-Lelle, Yewah.*

### FREN 401: Seminar

(1/2 Unit)
Prerequisite: Permission of instructor.
Special topics in languages, literature or civilization for advanced students. Conducted in French. *Staff.*

- and the remaining units selected from 300- or 400-level French courses

# French Minor

## Requirements for Minor in French

- A minimum of six units at the 201-level or higher, including at least four units at the 301-level or higher.
- A maximum of one unit of Advanced Placement credit can count toward the minor.
- All courses for the minor must be taken for a numerical grade.
- Residence in language-learning housing for at least one semester and successful completion of MLAC 110.

# French Minor, with Education Concentration

## Requirements for Minor in French with Education Concentration

- A maximum of one unit of Advanced Placement credit can count toward the minor.
- All courses for the minor must be taken for a numerical grade.
- Residence in language-learning housing for at least one semester and successful completion of MLAC 110.
- Completion of the American Council on the Teaching of Foreign Languages' Oral Proficiency Interview (OPI) examination at an "Advanced Low" level of proficiency (or higher). Students should consult closely with the Modern Languages and Cultures Department and consider taking this examination directly after the study abroad experience.

## A Minimum of Six Units at the 300-level, Including:

(See detailed description of requirements for major above.)

### FREN 301: Advanced Oral and Written Expression I

(1 Unit)
Proficiency Expected level of proficiency: FREN 202, equivalent or appropriate score on departmental placement test. Development of communication skills in French relative to grammar, syntax, appropriate registers, necessary vocabulary, non-verbal communication and culturally specific idiomatic usage. Also includes the processes of conversation development, thesis formation and strategies for argumentation within French cultural norms, as well as key contemporary issues of importance in the French-speaking world. Conducted in French. *Guenin-Lelle, Yewah.*

### FREN 302: Advanced Oral and Written Expression II

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent.
Development of communication skills in French relative to grammar, syntax, appropriate registers, necessary vocabulary, non-verbal cues and culturally-specific idiomatic usage, as well as skills in French/English and English/French translation. Also includes the processes of conversation development, thesis formation and strategies for argumentation operating within French cultural norms, especially relating to professional life and the workplace. Conducted in French. *Guenin-Lelle, Yewah.*

## One Unit Focusing on France:

### FREN 314: Multicultural France: Current Issues and Historical Perspectives

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent or permission of instructor.
Explores French society as a dynamic multicultural construct—France's changing place in the world, the changing role of women in French society and changing demographics, especially North African immigrants to France—through reading recent novels or short stories representing these issues. Studies the historical dimensions of the social phenomena and the historical reasons for the current situation. Conducted in French. *Guenin-Lelle, Yewah.*

### FREN 315: Writing/Filming France Inside Out

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent.
Applies various theories—narratology, explication de texte, and theories of adaptation—to critically inquire into the construction of literary texts and their filmic representations. Stresses oral and written communication in French. Conducted in French. *Guenin-Lelle, Yewah.*

### FREN 320: French Women Writers and Feminist Criticism

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent.
Analysis of works by French women writers from the Middle Ages to the present, as well as works of feminist critical theory. Conducted in French. Offered every three years. *Guenin-Lelle.*

## One Unit Focusing on the French-Speaking World:

### FREN 353: Francophone Africa

(1 Unit)
Proficiency Expected level of proficiency: FREN 303, FREN 314 or FREN 315.
A study of texts and contexts of francophone (Central and West) African societies through in-depth analyses of history, politics, music, art, film and literature, and especially, how those elements have shaped the people's contemporary world view. Conducted in French. *Yewah.*

### FREN 354: The French Caribbean: Les Antilles créoles

(1 Unit)
Proficiency Expected level of proficiency: FREN 303, FREN 314 or FREN 315.
Surveys post-colonialism, la créolisation, le métissage and changing identities. Topics include history and geography of these islands, situating them as part of the New World as well as having enduring cultural, linguistic and political bonds with France; Aimé Césaire and his essentialist quest for identity via Africa and the past; la créolisation, as first proposed by Glissant; and contemporary social issues, represented in literature, art and cinema. Conducted in French. *Guenin-Lelle, Yewah.*

### FREN 355: Quebec: A World Apart

(1 Unit)
Proficiency Expected level of proficiency: FREN 303, FREN 314 or FREN 315.
Examines socioeconomic, political, cultural, literary and artistic forces as well as relevant historical situations that have shaped this French-speaking "island" in anglophone North America. Conducted in French. *Guenin-Lelle, Yewah.*

## Education Courses:

### EDUC 338: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Humanities

(1/2 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in English and world languages (French, German and Spanish) in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke, Shanton.*

**OR**

### EDUC 339: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Humanities

(1 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in English and world languages (French, German and Spanish) in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke, Shanton.*

## Completion of Education Concentration

# French, B.A.

## Requirements for Major in French

In the French program students learn the language and culture of the French-speaking world. The 100- and 200-level courses focus on how to function within a French-speaking environment, through appropriate language use and cross-cultural understanding. Courses numbered FREN 303-FREN 315 designed to be taken before off-campus study in a French-speaking program and those numbered FREN 351-FREN 355 to be taken after return from off-campus study.

The upper-level courses emphasize area studies. Interdisciplinary in scope, they focus on the culture of a particular area or time period and examine the relevant literature as well as social issues, artistic movements, political change, religious influences and film.

The intent is to prepare students for international careers in which they will draw on their communication skills in French, and on their understanding of the history and culture of the French-speaking world.

## The Specific Requirements for the Major Are:

- A maximum of one unit of Advanced Placement credit can count toward the major.
- All courses for the major must be taken for a numerical grade.
- Residence in language-learning housing for at least one semester and successful completion of MLAC 110.
- Study abroad in an approved off-campus program. (If individual situations prevent this, the student should speak with the department chair.)

## A Minimum of Eight Units at the 201-level or Higher, Including:

(See detailed description of requirements for major above.)

## One Unit From:

### FREN 303: French for the Professions

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent.
Offers insights on the French and other French-speaking countries' work environment and the specialized knowledge necessary to communicate effectively in specific professions. Conducted in French. *Guenin-Lelle, Yewah.*

### FREN 314: Multicultural France: Current Issues and Historical Perspectives

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent or permission of instructor.
Explores French society as a dynamic multicultural construct—France's changing place in the world, the changing role of women in French society and changing demographics, especially North African immigrants to France—through reading recent novels or short stories representing these issues. Studies the historical dimensions of the social phenomena and the historical reasons for the current situation. Conducted in French. *Guenin-Lelle, Yewah.*

### FREN 315: Writing/Filming France Inside Out

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent.
Applies various theories—narratology, explication de texte, and theories of adaptation—to critically inquire into the construction of literary texts and their filmic representations. Stresses oral and written communication in French. Conducted in French. *Guenin-Lelle, Yewah.*

## One Unit From:

### FREN 351: French Society from Marie de France to Louis XIV

(1 Unit)
Proficiency Expected level of proficiency: FREN 303, FREN 314 or FREN 315.
Incorporates literature, art, history and l'histoire des idées, or changing epistemologies, during the French ancien régime (the Middle Ages, the Renaissance, the baroque and classical periods of the seventeenth century and the beginning of the Enlightenment in the early eighteenth century). Examines central issues such as the place of "the Divine" and humankind in the universe, the role of classical antiquity relative to traditions, identity and power, the role of women in society and the role of education as a vehicle for change. Conducted in French. *Guenin-Lelle, Yewah.*

### FREN 353: Francophone Africa

(1 Unit)
Proficiency Expected level of proficiency: FREN 303, FREN 314 or FREN 315.
A study of texts and contexts of francophone (Central and West) African societies through in-depth analyses of history, politics, music, art, film and literature, and especially, how those elements have shaped the people's contemporary world view. Conducted in French. *Yewah.*

### FREN 354: The French Caribbean: Les Antilles créoles

(1 Unit)
Proficiency Expected level of proficiency: FREN 303, FREN 314 or FREN 315.
Surveys post-colonialism, la créolisation, le métissage and changing identities. Topics include history and geography of these islands, situating them as part of the New World as well as having enduring cultural, linguistic and political bonds with France; Aimé Césaire and his essentialist quest for identity via Africa and the past; la créolisation, as first proposed by Glissant; and contemporary social issues, represented in literature, art and cinema. Conducted in French. *Guenin-Lelle, Yewah.*

### FREN 355: Quebec: A World Apart

(1 Unit)
Proficiency Expected level of proficiency: FREN 303, FREN 314 or FREN 315.
Examines socioeconomic, political, cultural, literary and artistic forces as well as relevant historical situations that have shaped this French-speaking "island" in anglophone North America. Conducted in French. *Guenin-Lelle, Yewah.*

## And a Senior Seminar

### FREN 400: Senior Seminar

(1/4 Unit)
Prerequisite: Declared French major or minor.
Students will reflect on lessons learned in the French program, identify competencies they have developed in French and in other areas of study, understand the importance of these competencies in today's world, and leave Albion more confident in their preparedness to enter the next stage of their professional development. *Guenin-Lelle, Yewah.*

# French, with Education Concentration, B.A.

## Requirements for Major in French with Education Concentration

- A maximum of one unit of Advanced Placement credit can count toward the major.
- All courses for the major must be taken for a numerical grade.
- Study abroad in an approved off-campus program.
- Residence in language-learning housing for at least one semester and successful completion of MLAC 110.
- Completion of the American Council on the Teaching of Foreign Languages' Oral Proficiency Interview (OPI) examination at an "Advanced Low" level of proficiency (or higher). Students should consult closely with the Modern Languages and Cultures Department and consider taking this examination directly after the study abroad experience.

## A Minimum of Eight Units at the 300-level, Including:

(See detailed description of requirements for major above.)

### FREN 301: Advanced Oral and Written Expression I

(1 Unit)
Proficiency Expected level of proficiency: FREN 202, equivalent or appropriate score on departmental placement test. Development of communication skills in French relative to grammar, syntax, appropriate registers, necessary vocabulary, non-verbal communication and culturally specific idiomatic usage. Also includes the processes of conversation development, thesis formation and strategies for argumentation within French cultural norms, as well as key contemporary issues of importance in the French-speaking world. Conducted in French. *Guenin-Lelle, Yewah.*

### FREN 302: Advanced Oral and Written Expression II

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent.
Development of communication skills in French relative to grammar, syntax, appropriate registers, necessary vocabulary, non-verbal cues and culturally-specific idiomatic usage, as well as skills in French/English and English/French translation. Also includes the processes of conversation development, thesis formation and strategies for argumentation operating within French cultural norms, especially relating to professional life and the workplace. Conducted in French. *Guenin-Lelle, Yewah.*

### FREN 400: Senior Seminar

(1/4 Unit)
Prerequisite: Declared French major or minor.
Students will reflect on lessons learned in the French program, identify competencies they have developed in French and in other areas of study, understand the importance of these competencies in today's world, and leave Albion more confident in their preparedness to enter the next stage of their professional development. *Guenin-Lelle, Yewah.*

## One Unit Focusing on France:

### FREN 314: Multicultural France: Current Issues and Historical Perspectives

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent or permission of instructor.
Explores French society as a dynamic multicultural construct—France's changing place in the world, the changing role of women in French society and changing demographics, especially North African immigrants to France—through reading recent novels or short stories representing these issues. Studies the historical dimensions of the social phenomena and the historical reasons for the current situation. Conducted in French. *Guenin-Lelle, Yewah.*

### FREN 315: Writing/Filming France Inside Out

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent.
Applies various theories—narratology, explication de texte, and theories of adaptation—to critically inquire into the construction of literary texts and their filmic representations. Stresses oral and written communication in French. Conducted in French. *Guenin-Lelle, Yewah.*

### FREN 320: French Women Writers and Feminist Criticism

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent.
Analysis of works by French women writers from the Middle Ages to the present, as well as works of feminist critical theory. Conducted in French. Offered every three years. *Guenin-Lelle.*

## One Unit Focusing on the French-Speaking World:

### FREN 353: Francophone Africa

(1 Unit)
Proficiency Expected level of proficiency: FREN 303, FREN 314 or FREN 315.
A study of texts and contexts of francophone (Central and West) African societies through in-depth analyses of history, politics, music, art, film and literature, and especially, how those elements have shaped the people's contemporary world view. Conducted in French. *Yewah.*

### FREN 354: The French Caribbean: Les Antilles créoles

(1 Unit)
Proficiency Expected level of proficiency: FREN 303, FREN 314 or FREN 315.
Surveys post-colonialism, la créolisation, le métissage and changing identities. Topics include history and geography of these islands, situating them as part of the New World as well as having enduring cultural, linguistic and political bonds with France; Aimé Césaire and his essentialist quest for identity via Africa and the past; la créolisation, as first

proposed by Glissant; and contemporary social issues, represented in literature, art and cinema. Conducted in French. *Guenin-Lelle, Yewah.*

### FREN 355: Quebec: A World Apart

(1 Unit)
Proficiency Expected level of proficiency: FREN 303, FREN 314 or FREN 315.
Examines socioeconomic, political, cultural, literary and artistic forces as well as relevant historical situations that have shaped this French-speaking "island" in anglophone North America. Conducted in French. *Guenin-Lelle, Yewah.*

## Education Courses:

### EDUC 338: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Humanities

(1/2 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in English and world languages (French, German and Spanish) in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke, Shanton.*

OR

### EDUC 339: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Humanities

(1 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in English and world languages (French, German and Spanish) in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke, Shanton.*

### EDUC 371: Literacy Essentials for Elementary Curriculum Design and Assessment

(1 Unit)
Prerequisites: EDUC 195 , EDUC 196 and permission of department.
Examines relevant research base and theory on early literacy acquisition and learning processes, assessments, and pedagogical approaches. Looks at culturally responsive pedagogy with children from a variety of cultural, economic, ethno-linguistic and racial backgrounds. Emphasizes the motivations, knowledge, practices, and strategies involved in teaching and learning. Requires planning and preparation, engagement in classroom environments, instruction in classroom environments, and formative and summative reflection. Twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers of Lower Elementary (PK-3) Education, Early Childhood Quality Standards, and the Michigan Core Teaching Practices. This course is required for all K-12 French, German and Spanish majors. *Shanton.*

## Completion of Education Concentration

# German Language and Culture for the Professions Minor

# Requirements for Minor in German Language and Culture for the Professions

- An internship abroad or a documented internship-like experience abroad that has been approved by the MLAC Department.
- A maximum of one unit of Advanced Placement credit can count toward the minor.
- Residence in language-learning housing for at least one semester and successful completion of MLAC 110.

## A Minimum of Six Units, Including:

### MLAC 305: Intercultural Understanding and Global Issues

(1 Unit)
Explores theoretical models of how cultures are derived and what it means to interact across cultural boundaries. Applies these theoretical models to selected global issues in order to demonstrate the potentialities and hazards of negotiation of global issues across borders. Useful for pre-professional students who want to attain the skills and knowledge to effectively function in an international/intercultural context. Taught in English. *Myers*

### GERM 201: Intermediate German

(1 Unit)
Proficiency Expected level of proficiency: GERM 102 or equivalent.
Continuation of the study of German language and culture through the contextualized study of grammatical concepts and vocabulary. Continues the development of the four basic skills necessary for the interpersonal, interpretive and presentational modes of communication. Authentic tapes and texts are the foundation of the teaching materials. Conducted in German. Tutorials with native speakers are required. *Myers.*

### GERM 202: Intermediate German, continued

(1 Unit)
Proficiency Expected level of proficiency: GERM 201 or equivalent.
Continuation of GERM 201. Practice with more sophisticated dialogues, reading of unedited short stories, poems and other authentic materials. Conducted in German. Tutorials with native speakers are required. *Myers.*

### GERM 301: German Conversation and Composition

(1 Unit)
Proficiency Expected level of proficiency: GERM 202 or equivalent.
Development of speaking, listening and writing skills; selective review of complex grammatical structures. Practice speaking about everyday situations in different ways (e.g., role play, dialogues, skits, oral reports); use of audio tapes. Writing of exercises and compositions with emphasis on correctness of expression, stylistic appropriateness and idiomatic usage. Learning of specialized vocabulary and idioms; writing of different types (e.g., dialogues, letters, journals, essays). *Myers.*

### GERM 303: German Language and Culture for the Professions

(1 Unit)
Proficiency Expected level of proficiency: GERM 301 or equivalent, or permission of instructor.
Intended to improve students' communicative skills in German and provide knowledge for the professions. Covers

aspects of the German business world such as banking, marketing and organizational structures. Assignments include development of marketing strategies and development of a business plan for a start-up venture. *Myers*.

- and the remaining unit selected from 300- or 400- level German courses

# German Language and Culture for the Professions, B.A.

## Requirements for Major in German Language and Culture for the Professions

As the world continues to become increasingly diverse across traditional borders and cultural boundaries, there will be more demand in the workplace and for communities to effectively negotiate otherness—different ways of living lives—which will directly impact professional practices.

Knowledge of a modern language and culture will continue to grow in importance as a foundation for functioning successfully in a global economy across many professions. This track in German is intended for those students who are pursuing preprofessional studies in fields such as economics and management, communication studies, science or public policy, among others, or for those students who are pursuing more traditional liberal arts fields and wish to add a practical component to their education. This track will provide a combination of preprofessional courses in the target language and cultural courses in order to prepare students for working in a culturally diverse world and economy. Students will be expected to attain high linguistic competence.

**Qualified students may choose a "fast track" language program at an approved summer institution domestically or language/internship program abroad during the summer after their freshman year. To qualify for this special program a student must complete an interview to be conducted by the Department of Modern Languages and Cultures**. For information about College policies on transfer credit, see the section of this catalog entitled General Academic Regulations.

## The Specific Requirements for the Major Are:

- An internship abroad or a documented internship-like experience abroad that has been approved by the MLAC Department.
- A maximum of one unit of Advanced Placement credit can count toward the major.
- Residence in language-learning housing for at least one semester and successful completion of MLAC 110.

## A Minimum of Nine Units, Including:

The seminar must be taken after all other requirements have been met or in the final semester of completion of the major requirements.

### MLAC 305: Intercultural Understanding and Global Issues

(1 Unit)
Explores theoretical models of how cultures are derived and what it means to interact across cultural boundaries. Applies these theoretical models to selected global issues in order to demonstrate the potentialities and hazards of negotiation of global issues across borders. Useful for pre-professional students who want to attain the skills and knowledge to effectively function in an international/intercultural context. Taught in English. *Myers*

### GERM 201: Intermediate German

(1 Unit)
Proficiency Expected level of proficiency: GERM 102 or equivalent.
Continuation of the study of German language and culture through the contextualized study of grammatical concepts and vocabulary. Continues the development of the four basic skills necessary for the interpersonal, interpretive and presentational modes of communication. Authentic tapes and texts are the foundation of the teaching materials. Conducted in German. Tutorials with native speakers are required. *Myers.*

### GERM 202: Intermediate German, continued

(1 Unit)
Proficiency Expected level of proficiency: GERM 201 or equivalent.
Continuation of GERM 201. Practice with more sophisticated dialogues, reading of unedited short stories, poems and other authentic materials. Conducted in German. Tutorials with native speakers are required. *Myers.*

### GERM 301: German Conversation and Composition

(1 Unit)
Proficiency Expected level of proficiency: GERM 202 or equivalent.
Development of speaking, listening and writing skills; selective review of complex grammatical structures. Practice speaking about everyday situations in different ways (e.g., role play, dialogues, skits, oral reports); use of audio tapes. Writing of exercises and compositions with emphasis on correctness of expression, stylistic appropriateness and idiomatic usage. Learning of specialized vocabulary and idioms; writing of different types (e.g., dialogues, letters, journals, essays). *Myers.*

### GERM 303: German Language and Culture for the Professions

(1 Unit)
Proficiency Expected level of proficiency: GERM 301 or equivalent, or permission of instructor.
Intended to improve students' communicative skills in German and provide knowledge for the professions. Covers aspects of the German business world such as banking, marketing and organizational structures. Assignments include development of marketing strategies and development of a business plan for a start-up venture. *Myers.*

### GERM 401: Seminar

(1/2 Unit)
Prerequisite: Permission of instructor.
Special topics in languages, literature or civilization for advanced students. Conducted in German. *Staff.*

- and the remaining units selected from 300- or 400-level German courses

# German Minor

## Requirements for Minor in German

- A minimum of six units at the 201-level or higher, including GERM 301.
- A maximum of one unit of Advanced Placement credit can count toward the minor.
- All courses for the minor must be taken for a numerical grade.
- Residence in language-learning housing for at least one semester and successful completion of MLAC 110.

# German Minor, with Education Concentration

## Requirements for Minor with Education Concentration

- A maximum of one unit of Advanced Placement credit can count toward the major.
- All courses for the minor must be taken for a numerical grade.
- Residence in language-learning housing for at least one semester and successful completion of MLAC 110.
- Completion of the American Council on the Teaching of Foreign Languages' Oral Proficiency Interview (OPI) examination at an "Advanced Low" level of proficiency (or higher). Students should consult closely with the Modern Languages and Cultures Department and consider taking this examination directly after the study abroad experience.
- Completion of Education Concentration

## A Minimum of Six Units at the 300-level, Including:

### GERM 301: German Conversation and Composition

(1 Unit)
Proficiency Expected level of proficiency: GERM 202 or equivalent.
Development of speaking, listening and writing skills; selective review of complex grammatical structures. Practice speaking about everyday situations in different ways (e.g., role play, dialogues, skits, oral reports); use of audio tapes. Writing of exercises and compositions with emphasis on correctness of expression, stylistic appropriateness and idiomatic usage. Learning of specialized vocabulary and idioms; writing of different types (e.g., dialogues, letters, journals, essays). *Myers.*

### GERM 302: German Conversation and Composition, continued

(1 Unit)
Proficiency Expected level of proficiency: GERM 301 or equivalent.
Continuation of practice in speaking, listening and writing skills; selective review of complex grammatical structures. Practice speaking about everyday situations in different ways (e.g., role play, dialogues, skits, oral reports); use of audio tapes. Writing of exercises and compositions with emphasis on correctness of expression, stylistic appropriateness and idiomatic usage. Learning of specialized vocabulary and idioms; writing of different types (e.g., dialogues, letters, journals, essays). *Myers.*

## One Unit from Historical and Cultural Studies Sequence:

### GERM 306: German Cultural History: From Germania to Nation State

(1 Unit)
Proficiency Expected level of proficiency: GERM 301 or equivalent, or permission of instructor.
Introduces pivotal moments and figures in German cultural history from the Roman Empire to the creation of the first German nation-state in 1871. Provides a deeper understanding of German-speaking culture and society as well as the constructed nature of all forms of national identity. *Myers.*

### GERM 307: German Cultural History: Empire, Stunde Null, Reunification

(1 Unit)
Proficiency Expected level of proficiency: GERM 301 or equivalent, or permission of instructor.
Explores the radical transformations in German society and culture from the late Wilhelminian era to reunification at the end of the twentieth century through the combination of historical texts, literature, film and "eyewitness" documentation. Situates German cultural history in the larger context of world history. Offered every third year. *Myers.*

- GERM 350

## One Unit from Text and Cultural Production Sequence:

- GERM 312

### GERM 316: Crisis in Language: A Literary Survey (1890-1945)

(1 Unit)
Proficiency Expected level of proficiency: GERM 301 or GERM 302 or equivalent, or permission of instructor.
Includes a selection of German works from different genres (plays, short fiction, poetry, theoretical texts) and films from the era 1890-1945. Focuses on each work as a cultural representation of the historical context in which it was written or produced, exploring how each was engaged with the social, political and cultural transformations of the era (e.g., social Darwinism, crisis of narration and language, bourgeois morals, the individual and society, the role of the artist, the Third Reich). *Myers.*

- GERM 355

## One Unit from German Ethnic and Environmental Studies Sequence:

- GERM 310

### GERM 314: Multiculturalism in Germany (World War II to present)

(1 Unit)
Proficiency Expected level of proficiency: GERM 301 or permission of instructor.
Explores how German society has become multiculturally constructed since World War I—from the Holocaust aftermath to current sociocultural debates about the role and treatment of women of color, the large Turkish immigrant population, and Islam and Islamic nationalism in Germany—through the study of various discourses (fiction, essay, speeches, poetry, film, TV news) representing these issues. Studies how perceptions of ethnic difference have evolved in Germany and have become intertwined with social and political debates of the day. Conducted in German. *Myers.*

# Education Courses:

### EDUC 338: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Humanities

(1/2 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in English and world languages (French, German and Spanish) in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke, Shanton.*

**OR**

### EDUC 339: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Humanities

(1 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in English and world languages (French, German and Spanish) in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke, Shanton.*

# German, B.A.

## Requirements for Major in German

Students in the German program study the German language and learn about the social and cultural history of the German-speaking world. Courses at the 100- and 200-level focus on acquiring a basic proficiency in German, an understanding of German culture and an insight into how language and culture are connected.

The upper-level courses are interdisciplinary in scope and focus on different areas of German cultural studies and intellectual history. Their intent is to provide students with a greater understanding of multicultural issues past and present, as well as an awareness of German literary and social history.

A major in German is an excellent preparation for students considering graduate school in a number of different fields, including but not limited to German, history and political science, as well as for international careers, which will draw on students' ability to read, write and speak German as well as their understanding of and ability to interact with German culture.

## The Specific Requirements for the Major Are:

- A minimum of eight units at the 201-level or higher, including GERM 301.
- A maximum of one unit of Advanced Placement credit can count toward the major.
- All courses for the major must be taken for a numerical grade.
- Residence in language-learning housing for at least one semester and successful completion of MLAC 110 .
- Study abroad in an approved off-campus program. (If individual situations prevent this, the student should speak with the department chair.)

# German, with Education Concentration, B.A.

## Requirements for Major in German with Education Concentration

- A maximum of one unit of Advanced Placement credit can count toward a major.
- All courses for the major must be taken for a numerical grade.
- Study abroad in an approved off-campus program.
- Residence in language-learning housing for at least one semester and successful completion of MLAC 110.
- Completion of the American Council on the Teaching of Foreign Languages' Oral Proficiency Interview (OPI) examination at an "Advanced Low" level of proficiency (or higher). Students should consult closely with the Modern Languages and Cultures Department and consider taking this examination directly after the study abroad experience.
- Completion of Education Concentration

## A Minimum of Eight Units at the 300-level, Including:

### GERM 301: German Conversation and Composition

(1 Unit)
Proficiency Expected level of proficiency: GERM 202 or equivalent.
Development of speaking, listening and writing skills; selective review of complex grammatical structures. Practice speaking about everyday situations in different ways (e.g., role play, dialogues, skits, oral reports); use of audio tapes. Writing of exercises and compositions with emphasis on correctness of expression, stylistic appropriateness and idiomatic usage. Learning of specialized vocabulary and idioms; writing of different types (e.g., dialogues, letters, journals, essays). *Myers.*

### GERM 302: German Conversation and Composition, continued

(1 Unit)
Proficiency Expected level of proficiency: GERM 301 or equivalent.
Continuation of practice in speaking, listening and writing skills; selective review of complex grammatical structures. Practice speaking about everyday situations in different ways (e.g., role play, dialogues, skits, oral reports); use of audio tapes. Writing of exercises and compositions with emphasis on correctness of expression, stylistic appropriateness and idiomatic usage. Learning of specialized vocabulary and idioms; writing of different types (e.g., dialogues, letters, journals, essays). *Myers.*

## One Unit from Historical and Cultural Studies Sequence:

### GERM 306: German Cultural History: From Germania to Nation State

(1 Unit)
Proficiency Expected level of proficiency: GERM 301 or equivalent, or permission of instructor.
Introduces pivotal moments and figures in German cultural history from the Roman Empire to the creation of the first German nation-state in 1871. Provides a deeper understanding of German-speaking culture and society as well as the constructed nature of all forms of national identity. *Myers.*

### GERM 307: German Cultural History: Empire, Stunde Null, Reunification

(1 Unit)
Proficiency Expected level of proficiency: GERM 301 or equivalent, or permission of instructor.
Explores the radical transformations in German society and culture from the late Wilhelminian era to reunification at the end of the twentieth century through the combination of historical texts, literature, film and "eyewitness" documentation. Situates German cultural history in the larger context of world history. Offered every third year. *Myers.*

## One Unit from Text and Cultural Production Sequence:

### GERM 316: Crisis in Language: A Literary Survey (1890-1945)

(1 Unit)
Proficiency Expected level of proficiency: GERM 301 or GERM 302 or equivalent, or permission of instructor.
Includes a selection of German works from different genres (plays, short fiction, poetry, theoretical texts) and films from the era 1890-1945. Focuses on each work as a cultural representation of the historical context in which it was written or produced, exploring how each was engaged with the social, political and cultural transformations of the era

(e.g., social Darwinism, crisis of narration and language, bourgeois morals, the individual and society, the role of the artist, the Third Reich). *Myers.*

## One Unit from German Ethnic and Environmental Studies Sequence:

### GERM 314: Multiculturalism in Germany (World War II to present)

(1 Unit)
Proficiency Expected level of proficiency: GERM 301 or permission of instructor.
Explores how German society has become multiculturally constructed since World War I—from the Holocaust aftermath to current sociocultural debates about the role and treatment of women of color, the large Turkish immigrant population, and Islam and Islamic nationalism in Germany—through the study of various discourses (fiction, essay, speeches, poetry, film, TV news) representing these issues. Studies how perceptions of ethnic difference have evolved in Germany and have become intertwined with social and political debates of the day. Conducted in German. *Myers.*

## Education Courses:

### EDUC 338: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Humanities

(1/2 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in English and world languages (French, German and Spanish) in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke, Shanton.*

OR

### EDUC 339: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Humanities

(1 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in English and world languages (French, German and Spanish) in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke, Shanton.*

### EDUC 371: Literacy Essentials for Elementary Curriculum Design and Assessment

(1 Unit)
Prerequisites: EDUC 195 , EDUC 196 and permission of department.
Examines relevant research base and theory on early literacy acquisition and learning processes, assessments, and pedagogical approaches. Looks at culturally responsive pedagogy with children from a variety of cultural, economic, ethno-linguistic and racial backgrounds. Emphasizes the motivations, knowledge, practices, and strategies involved in teaching and learning. Requires planning and preparation, engagement in classroom environments, instruction in classroom environments, and formative and summative reflection. Twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers of Lower Elementary (PK-3) Education, Early Childhood Quality Standards, and the Michigan Core Teaching Practices. This course is required for all K-12 French, German and Spanish majors. *Shanton.*

# Spanish Language and Culture for the Professions Minor

## Requirements for Minor in Spanish Language and Culture for the Professions

## A Minimum of Six Units, Including:

### MLAC 305: Intercultural Understanding and Global Issues

(1 Unit)
Explores theoretical models of how cultures are derived and what it means to interact across cultural boundaries. Applies these theoretical models to selected global issues in order to demonstrate the potentialities and hazards of negotiation of global issues across borders. Useful for pre-professional students who want to attain the skills and knowledge to effectively function in an international/intercultural context. Taught in English. *Myers*

### SPAN 301: Advanced Oral and Written Expression

(1 Unit)
Proficiency Expected level of proficiency: SPAN 202, appropriate score on departmental placement test or permission of instructor.
Development of communication skills in Spanish relative to grammar, syntax, appropriate registers, necessary vocabulary, non-verbal cues and culturally specific idiomatic usage. Also includes the processes of conversation development, thesis formation and strategies for argumentation operating within Hispanic cultural norms, as well as key contemporary issues of importance to the Spanish-speaking world. Conducted in Spanish. Tutorials with teaching assistants are integrated into the course. *Staff.*

### SPAN 300: Spanish for Heritage Speakers

(1 Unit)
Prerequisite: Determined by Placement Exam or Instructor's Permission
The course is designed for students who were raised in a home where Spanish is spoken, who speak or understand Spanish, and are to some degree bilingual in English and Spanish. The course will include composition and conversation, with a focus on aspects of grammar and vocabulary that are of particular interest to heritage learners. Assignments will be based on a variety of readings about contemporary issues of importance to the Spanish-speaking world. Conducted in Spanish. Lecture *Staff*

OR

### SPAN 303: Spanish for the Professions

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
Designed for students who are interested in studying Spanish in the context of activities related to the professional world (business, health care, education, finance, law, social work, etc.). Emphasizes the specialized vocabulary of the professional world and requires a working knowledge of Spanish grammar. Includes topics ranging from specific professions, to generalized professional concerns, to translation. Conducted in Spanish. *Staff.*

- and the remaining units selected from 300- or 400-level Spanish courses.

## Additional Requirements

- An internship or a documented internship-like experience that has been approved by the MLAC Department.
- A maximum of one unit Advanced Placement credit can count toward the minor.
- Residency in language-learning housing for at least one semester (or MLAC department-approved equivalency) and successful completion of MLAC 110.

# Spanish Language and Culture for the Professions, B.A.

## Requirements for Major in Spanish Language and Culture for the Professions

As the world continues to become increasingly diverse across traditional borders and cultural boundaries, there will be more demand in the workplace and for communities to effectively negotiate otherness—different ways of living lives—which will directly impact professional practices.

Knowledge of a modern language and culture will continue to grow in importance as a foundation for functioning successfully in a global economy across many professions. This track in Spanish is intended for those students who are pursuing preprofessional studies in fields such as economics and management, communication studies, science or public policy, among others, or for those students who are pursuing more traditional liberal arts fields and wish to add a practical component to their education. This track will provide a combination of preprofessional courses in the target language and cultural courses in order to prepare students for working in a culturally diverse world and economy. Students will be expected to attain high linguistic competence.

**Qualified students may choose a "fast track" language program at an approved summer institution domestically or language/internship program abroad during the summer after their freshman year. To qualify for this special program a student must complete an interview to be conducted by the Department of Modern Languages and Cultures.** For information about College policies on transfer credit, see the section of this catalog entitled General Academic Regulations.

## The Specific Requirements for the Major Are:

### A Minimum of Nine Units, Including:

The seminar must be taken after all other requirements have been met or in the final semester of completion of the major requirements.

#### MLAC 305: Intercultural Understanding and Global Issues

(1 Unit)
Explores theoretical models of how cultures are derived and what it means to interact across cultural boundaries. Applies these theoretical models to selected global issues in order to demonstrate the potentialities and hazards of negotiation of global issues across borders. Useful for pre-professional students who want to attain the skills and knowledge to effectively function in an international/intercultural context. Taught in English. *Myers*

#### SPAN 300: Spanish for Heritage Speakers

(1 Unit)
Prerequisite: Determined by Placement Exam or Instructor's Permission
The course is designed for students who were raised in a home where Spanish is spoken, who speak or understand Spanish, and are to some degree bilingual in English and Spanish. The course will include composition and

conversation, with a focus on aspects of grammar and vocabulary that are of particular interest to heritage learners. Assignments will be based on a variety of readings about contemporary issues of importance to the Spanish-speaking world. Conducted in Spanish. Lecture *Staff*

OR

### SPAN 301: Advanced Oral and Written Expression

(1 Unit)
Proficiency Expected level of proficiency: SPAN 202, appropriate score on departmental placement test or permission of instructor.
Development of communication skills in Spanish relative to grammar, syntax, appropriate registers, necessary vocabulary, non-verbal cues and culturally specific idiomatic usage. Also includes the processes of conversation development, thesis formation and strategies for argumentation operating within Hispanic cultural norms, as well as key contemporary issues of importance to the Spanish-speaking world. Conducted in Spanish. Tutorials with teaching assistants are integrated into the course. *Staff.*

### SPAN 303: Spanish for the Professions

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
Designed for students who are interested in studying Spanish in the context of activities related to the professional world (business, health care, education, finance, law, social work, etc.). Emphasizes the specialized vocabulary of the professional world and requires a working knowledge of Spanish grammar. Includes topics ranging from specific professions, to generalized professional concerns, to translation. Conducted in Spanish. *Staff.*

### SPAN 401: Seminar

(1/2 Unit)
Proficiency Expected level of proficiency: SPAN 314 or SPAN 315 or permission of instructor.
Variable topic seminar. Conducted in Spanish. *Staff.*

- and the remaining units selected from 300- or 400-level Spanish courses

## Additional Requirements

- The seminar (SPAN 401) must be taken after all other requirements have been met or in the final semester of completion of the major requirements.
- An internship or a documented internship-like experience that has been approved by the MLAC Department.
- A maximum of one unit of Advanced Placement credit can count toward the major.
- Residence in language-learning housing for at least one semester (or MLAC department-approved equivalency) and successful completion of MLAC 110.

# Spanish Minor

## Requirements for Minor in Spanish

## A Minimum of Six Units at the 201-level or Higher, Including:

### SPAN 300: Spanish for Heritage Speakers

(1 Unit)
Prerequisite: Determined by Placement Exam or Instructor's Permission
The course is designed for students who were raised in a home where Spanish is spoken, who speak or understand Spanish, and are to some degree bilingual in English and Spanish. The course will include composition and conversation, with a focus on aspects of grammar and vocabulary that are of particular interest to heritage learners. Assignments will be based on a variety of readings about contemporary issues of importance to the Spanish-speaking world. Conducted in Spanish. Lecture *Staff*

OR

### SPAN 301: Advanced Oral and Written Expression

(1 Unit)
Proficiency Expected level of proficiency: SPAN 202, appropriate score on departmental placement test or permission of instructor.
Development of communication skills in Spanish relative to grammar, syntax, appropriate registers, necessary vocabulary, non-verbal cues and culturally specific idiomatic usage. Also includes the processes of conversation development, thesis formation and strategies for argumentation operating within Hispanic cultural norms, as well as key contemporary issues of importance to the Spanish-speaking world. Conducted in Spanish. Tutorials with teaching assistants are integrated into the course. *Staff.*

## At Least One Unit From:

### SPAN 314: Storytellers

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
An introduction to the workings of storytelling. Focuses on the short story as a genre to explore the different ways of narrating through key literary and cultural movements that have defined the Spanish-speaking world, including the oral and pre-Columbian traditions, romanticism, modernism and magical-realism. Conducted in Spanish. *Staff.*

### SPAN 315: Narrative Arts in the Spanish-Speaking World: Textual Analysis and Interpretation

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
An introduction to the analysis, interpretation and appreciation of literature and cultural production from the Spanish-speaking world. Emphasis will be placed on short story, novel, theatre and film. Each analysis will include a detailed study of the work itself, and an examination of how the work is a product of and influences its cultural context. We will also introduce other critical approaches that are useful for a specific work, genre or subgenre. Conducted in Spanish. *Staff.*

### SPAN 350: Gender in the Spanish-Speaking World

(1 Unit)
Proficiency Expected level of proficiency: SPAN 314 or SPAN 315 or permission of instructor.
Students will analyze how gender is constructed and represented in Spanish-speaking societies through the examination of a wide range of cultural artifacts (i.e. literature, film, media) from the Spanish-speaking world. Writing assignments will assess students' comprehension of texts and their ability to incorporate critical analysis within the theoretical context of gender. Conducted in Spanish. *Staff.*

### SPAN 360: Key Issues in Spanish Peninsular Literature and Culture

(1 Unit)
Proficiency Expected level of proficiency: SPAN 305 or SPAN 314 or SPAN 315, or permission of instructor.
Analysis of a special problem, topic, issue, phenomenon, period, author, genre or movement in Spanish Peninsular Literature and/or culture from its beginning to the present. Conducted in Spanish. *Oswald.*

## SPAN 361: Key Issues in Latin American Literature and Culture

(1 Unit)
Proficiency Expected level of proficiency: Spanish 306 or 314 or 315, or permission of instructor.
Analysis of a special problem, topic, issue, phenomenon, period, author, genre or movement in Latin American literature and/or culture from its beginning to the present. Conducted in Spanish. *Staff.*

## SPAN 362: Latinx Literature and Cultures in the United States

(1 Unit)
Proficiency Expected level of proficiency: SPAN 307 or SPAN 314 or SPAN 315, or permission of instructor.
Analysis of a special problem, topic, issue, phenomenon, period, author, genre or movement in U.S. Latino or Chicano literature and/or culture from its beginning to the present. Conducted in Spanish. *Staff.*

## SPAN 388: Selected Topics

(1/2 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## SPAN 389: Selected Topics

(1 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## SPAN 398: Practicum

(1/2 Unit)
Experience in language teaching in the classroom or with individual students under the close supervision of a regular instructor. Offered on a credit/no credit basis. *Staff.*

## SPAN 401: Seminar

(1/2 Unit)
Proficiency Expected level of proficiency: SPAN 314 or SPAN 315 or permission of instructor.
Variable topic seminar. Conducted in Spanish. *Staff.*

## SPAN 402: Seminar

(1 Unit)
Proficiency Expected level of proficiency: SPAN 314 or SPAN 315 or permission of instructor.
Variable topic seminar. Conducted in Spanish. *Staff.*

## Additional Requirements

- A maximum of one unit of Advanced Placement credit can count toward the minor.
- All courses for the minor must be taken for a numerical grade (except SPAN 398).
- Residency in language-learning housing for at least one semester (or MLAC department-approved equivalency) and successful completion of MLAC 110.

# Spanish Minor, with Education Concentration

## Requirements for Minor in Spanish with Education Concentration

## A Minimum of Six Units at the 300-level or Higher, Including:

### SPAN 301: Advanced Oral and Written Expression

(1 Unit)
Proficiency Expected level of proficiency: SPAN 202, appropriate score on departmental placement test or permission of instructor.
Development of communication skills in Spanish relative to grammar, syntax, appropriate registers, necessary vocabulary, non-verbal cues and culturally specific idiomatic usage. Also includes the processes of conversation development, thesis formation and strategies for argumentation operating within Hispanic cultural norms, as well as key contemporary issues of importance to the Spanish-speaking world. Conducted in Spanish. Tutorials with teaching assistants are integrated into the course. *Staff.*

AND

### SPAN 302: Advanced Oral and Written Expression through Hispanic Film

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
Development of communication skills in Spanish relative to grammar, syntax, appropriate registers, necessary vocabulary, non-verbal cues and culturally specific idiomatic usage. Also includes the processes of conversation development, thesis formation and strategies for argumentation operating within Hispanic cultural norms, as well as key contemporary issues of importance to the Spanish-speaking world. Improves fluency through the viewing, analysis and interpretation of Hispanic film. Conducted in Spanish. Tutorials with teaching assistants are integrated into the course. *Staff*.

OR

### SPAN 303: Spanish for the Professions

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
Designed for students who are interested in studying Spanish in the context of activities related to the professional world (business, health care, education, finance, law, social work, etc.). Emphasizes the specialized vocabulary of the professional world and requires a working knowledge of Spanish grammar. Includes topics ranging from specific professions, to generalized professional concerns, to translation. Conducted in Spanish. *Staff.*

OR

### SPAN 304: Advanced Oral and Written Expression through Creative Writing

(1 Unit)
Proficiency Expected level of proficiency:  SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
Focus will vary, but may include the following: "Spanish/Latin American/ U.S. Latino Theatre," "Spanish/Latin American/ U.S. Latino Short Story" and "Spanish/Latin American/ U.S. Latino Poetry." Introduces the respective genre through readings of literary works and critical and theoretical studies. Includes development of a portfolio of creative writing projects produced individually and collaboratively. Conducted in Spanish. *Oswald.*

## One Unit from Courses Focusing on Latin America:

### SPAN 306: South American Identities and Cultural Perspectives

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or  SPAN 301 or equivalent, or permission of instructor.
Examination of past, present and future struggles for identity and cultural perspective in South America, with a focus on the Southern Cone and Andes regions. Explores cultural artifacts such as music, visual arts, performance arts, literature, popular culture and folklore in South America from the pre-Columbian period to the twenty-first century. Conducted in Spanish. *Staff.*

### SPAN 314: Storytellers

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
An introduction to the workings of storytelling. Focuses on the short story as a genre to explore the different ways of narrating through key literary and cultural movements that have defined the Spanish-speaking world, including the oral and pre-Columbian traditions, romanticism, modernism and magical-realism. Conducted in Spanish. *Staff.*

### SPAN 361: Key Issues in Latin American Literature and Culture

(1 Unit)
Proficiency Expected level of proficiency: Spanish 306 or 314 or 315, or permission of instructor.
Analysis of a special problem, topic, issue, phenomenon, period, author, genre or movement in Latin American literature and/or culture from its beginning to the present. Conducted in Spanish. *Staff.*

## One Unit from Courses Focusing on Transamerican Latino/a Studies:

### SPAN 307: Cultural Encounters: Caribbean, Central and North America

(1 Unit)
Proficiency Expected level of proficiency:  SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
Examines past, present and future struggles of cultural encounters and production in the Spanish-speaking Caribbean, Mexico and Central America. Explores cultural artifacts such as music, visual arts, performance arts, literature, popular culture and folklore from the legacy of the pre-Columbian period to the twenty-first century and considers this region's growing interaction with the United States. Conducted in Spanish. *Staff.*

### SPAN 362: Latinx Literature and Cultures in the United States

(1 Unit)
Proficiency Expected level of proficiency: SPAN 307 or SPAN 314 or SPAN 315, or permission of instructor.
Analysis of a special problem, topic, issue, phenomenon, period, author, genre or movement in U.S. Latino or Chicano literature and/or culture from its beginning to the present. Conducted in Spanish. *Staff.*

## One Unit from Courses Focusing on Spain:

### SPAN 305: Multicultural Spain: Historical Perspectives and Current Issues

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
Explores Spanish society as a dynamic multicultural construct—Spain's changing role in the world; the intersection of Castilian, Galician, Andalusian, Catalan and Basque cultures; shifting demographics, etc.—through the study of historical and literary texts, media sources, and other pertinent cultural artifacts. Studies the historical dimensions of the social phenomena and the historical reasons for the contemporary social, political and cultural situation. Conducted in Spanish. *Oswald.*

### SPAN 360: Key Issues in Spanish Peninsular Literature and Culture

(1 Unit)
Proficiency Expected level of proficiency: SPAN 305 or SPAN 314 or SPAN 315, or permission of instructor.
Analysis of a special problem, topic, issue, phenomenon, period, author, genre or movement in Spanish Peninsular Literature and/or culture from its beginning to the present. Conducted in Spanish. *Oswald.*

## Education Courses:

### EDUC 338: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Humanities

(1/2 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in English and world languages (French, German and Spanish) in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke, Shanton.*

**OR**

### EDUC 339: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Humanities

(1 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in English and world languages (French, German and Spanish) in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke, Shanton.*

## Additional Requirements

- Residence in language-learning housing for at least one semester and successful completion of MLAC 110.
- Completion of the American Council on the Teaching of Foreign Languages' Oral Proficiency Interview (OPI) examination at an "Advanced Low" level of proficiency (or higher). Students should consult closely with the Modern Languages and Cultures Department and consider taking this examination directly after the study abroad experience.
- A maximum of one unit of Advanced Placement credit can count toward the minor.
- All courses for the minor must be taken for a numerical grade.

- Completion of Education Concentration

# Spanish, B.A.

## Requirements for Major in Spanish

## A Minimum of Eight Units at the 201-level or Higher, Including:

### SPAN 300: Spanish for Heritage Speakers

(1 Unit)
Prerequisite: Determined by Placement Exam or Instructor's Permission
The course is designed for students who were raised in a home where Spanish is spoken, who speak or understand Spanish, and are to some degree bilingual in English and Spanish. The course will include composition and conversation, with a focus on aspects of grammar and vocabulary that are of particular interest to heritage learners. Assignments will be based on a variety of readings about contemporary issues of importance to the Spanish-speaking world. Conducted in Spanish. Lecture *Staff*

OR

### SPAN 301: Advanced Oral and Written Expression

(1 Unit)
Proficiency Expected level of proficiency: SPAN 202, appropriate score on departmental placement test or permission of instructor.
Development of communication skills in Spanish relative to grammar, syntax, appropriate registers, necessary vocabulary, non-verbal cues and culturally specific idiomatic usage. Also includes the processes of conversation development, thesis formation and strategies for argumentation operating within Hispanic cultural norms, as well as key contemporary issues of importance to the Spanish-speaking world. Conducted in Spanish. Tutorials with teaching assistants are integrated into the course. *Staff.*

## And at Least One Unit Taken On Campus At Albion College From:

### SPAN 350: Gender in the Spanish-Speaking World

(1 Unit)
Proficiency Expected level of proficiency: SPAN 314 or SPAN 315 or permission of instructor.
Students will analyze how gender is constructed and represented in Spanish-speaking societies through the examination of a wide range of cultural artifacts (i.e. literature, film, media) from the Spanish-speaking world. Writing assignments will assess students' comprehension of texts and their ability to incorporate critical analysis within the theoretical context of gender. Conducted in Spanish. *Staff.*

### SPAN 360: Key Issues in Spanish Peninsular Literature and Culture

(1 Unit)
Proficiency Expected level of proficiency: SPAN 305 or SPAN 314 or SPAN 315, or permission of instructor.
Analysis of a special problem, topic, issue, phenomenon, period, author, genre or movement in Spanish Peninsular Literature and/or culture from its beginning to the present. Conducted in Spanish. *Oswald.*

### SPAN 361: Key Issues in Latin American Literature and Culture

(1 Unit)
Proficiency Expected level of proficiency: Spanish 306 or 314 or 315, or permission of instructor.
Analysis of a special problem, topic, issue, phenomenon, period, author, genre or movement in Latin American literature and/or culture from its beginning to the present. Conducted in Spanish. *Staff.*

### SPAN 362: Latinx Literature and Cultures in the United States

(1 Unit)
Proficiency Expected level of proficiency: SPAN 307 or SPAN 314 or SPAN 315, or permission of instructor.
Analysis of a special problem, topic, issue, phenomenon, period, author, genre or movement in U.S. Latino or Chicano literature and/or culture from its beginning to the present. Conducted in Spanish. *Staff.*

### SPAN 388: Selected Topics

(1/2 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

### SPAN 389: Selected Topics

(1 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

### SPAN 398: Practicum

(1/2 Unit)
Experience in language teaching in the classroom or with individual students under the close supervision of a regular instructor. Offered on a credit/no credit basis. *Staff.*

### SPAN 401: Seminar

(1/2 Unit)
Proficiency Expected level of proficiency: SPAN 314 or SPAN 315 or permission of instructor.
Variable topic seminar. Conducted in Spanish. *Staff.*

### SPAN 402: Seminar

(1 Unit)
Proficiency Expected level of proficiency: SPAN 314 or SPAN 315 or permission of instructor.
Variable topic seminar. Conducted in Spanish. *Staff.*

## Additional Requirements

- A maximum of one unit of Advanced Placement credit can count toward the major.
- All courses for the major must be taken for a numerical grade (except SPAN 398).

- Residence in language-learning housing for at least one semester (or MLAC department-approved equivalency) and successful completion of MLAC 110.
- Study in an off-campus program approved by the MLAC department. (If individual situations prevent this, the student should speak with the department chair.)

# Spanish, with Education Concentration, B.A.

## Requirements for Major in Spanish with Education Concentration

## A Minimum of Eight Units at the 300-level or Higher, Including:

### SPAN 301: Advanced Oral and Written Expression

(1 Unit)
Proficiency Expected level of proficiency: SPAN 202, appropriate score on departmental placement test or permission of instructor.
Development of communication skills in Spanish relative to grammar, syntax, appropriate registers, necessary vocabulary, non-verbal cues and culturally specific idiomatic usage. Also includes the processes of conversation development, thesis formation and strategies for argumentation operating within Hispanic cultural norms, as well as key contemporary issues of importance to the Spanish-speaking world. Conducted in Spanish. Tutorials with teaching assistants are integrated into the course. *Staff.*

AND

### SPAN 302: Advanced Oral and Written Expression through Hispanic Film

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
Development of communication skills in Spanish relative to grammar, syntax, appropriate registers, necessary vocabulary, non-verbal cues and culturally specific idiomatic usage. Also includes the processes of conversation development, thesis formation and strategies for argumentation operating within Hispanic cultural norms, as well as key contemporary issues of importance to the Spanish-speaking world. Improves fluency through the viewing, analysis and interpretation of Hispanic film. Conducted in Spanish. Tutorials with teaching assistants are integrated into the course. *Staff.*

OR

### SPAN 303: Spanish for the Professions

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
Designed for students who are interested in studying Spanish in the context of activities related to the professional world (business, health care, education, finance, law, social work, etc.). Emphasizes the specialized vocabulary of the professional world and requires a working knowledge of Spanish grammar. Includes topics ranging from specific professions, to generalized professional concerns, to translation. Conducted in Spanish. *Staff.*

OR

### SPAN 304: Advanced Oral and Written Expression through Creative Writing

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.

Focus will vary, but may include the following: "Spanish/Latin American/ U.S. Latino Theatre," "Spanish/Latin American/ U.S. Latino Short Story" and "Spanish/Latin American/ U.S. Latino Poetry." Introduces the respective genre through readings of literary works and critical and theoretical studies. Includes development of a portfolio of creative writing projects produced individually and collaboratively. Conducted in Spanish. *Oswald.*

## One Unit from Courses Focusing on Latin America:

### SPAN 306: South American Identities and Cultural Perspectives

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
Examination of past, present and future struggles for identity and cultural perspective in South America, with a focus on the Southern Cone and Andes regions. Explores cultural artifacts such as music, visual arts, performance arts, literature, popular culture and folklore in South America from the pre-Columbian period to the twenty-first century. Conducted in Spanish. *Staff.*

### SPAN 314: Storytellers

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
An introduction to the workings of storytelling. Focuses on the short story as a genre to explore the different ways of narrating through key literary and cultural movements that have defined the Spanish-speaking world, including the oral and pre-Columbian traditions, romanticism, modernism and magical-realism. Conducted in Spanish. *Staff.*

### SPAN 361: Key Issues in Latin American Literature and Culture

(1 Unit)
Proficiency Expected level of proficiency: Spanish 306 or 314 or 315, or permission of instructor.
Analysis of a special problem, topic, issue, phenomenon, period, author, genre or movement in Latin American literature and/or culture from its beginning to the present. Conducted in Spanish. *Staff.*

## One Unit from Courses Focusing on Transamerican Latino/a Studies:

### SPAN 307: Cultural Encounters: Caribbean, Central and North America

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
Examines past, present and future struggles of cultural encounters and production in the Spanish-speaking Caribbean, Mexico and Central America. Explores cultural artifacts such as music, visual arts, performance arts, literature, popular culture and folklore from the legacy of the pre-Columbian period to the twenty-first century and considers this region's growing interaction with the United States. Conducted in Spanish. *Staff.*

### SPAN 362: Latinx Literature and Cultures in the United States

(1 Unit)
Proficiency Expected level of proficiency: SPAN 307 or SPAN 314 or SPAN 315, or permission of instructor.
Analysis of a special problem, topic, issue, phenomenon, period, author, genre or movement in U.S. Latino or Chicano literature and/or culture from its beginning to the present. Conducted in Spanish. *Staff.*

## One Unit from Courses Focusing on Spain:

### SPAN 305: Multicultural Spain: Historical Perspectives and Current Issues

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
Explores Spanish society as a dynamic multicultural construct—Spain's changing role in the world; the intersection of Castilian, Galician, Andalusian, Catalan and Basque cultures; shifting demographics, etc.—through the study of historical and literary texts, media sources, and other pertinent cultural artifacts. Studies the historical dimensions of the social phenomena and the historical reasons for the contemporary social, political and cultural situation. Conducted in Spanish. *Oswald.*

### SPAN 360: Key Issues in Spanish Peninsular Literature and Culture

(1 Unit)
Proficiency Expected level of proficiency: SPAN 305 or SPAN 314 or SPAN 315, or permission of instructor.
Analysis of a special problem, topic, issue, phenomenon, period, author, genre or movement in Spanish Peninsular Literature and/or culture from its beginning to the present. Conducted in Spanish. *Oswald.*

## Education Courses:

### EDUC 338: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Humanities

(1/2 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in English and world languages (French, German and Spanish) in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke, Shanton.*

**OR**

### EDUC 339: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Humanities

(1 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in English and world languages (French, German and Spanish) in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke, Shanton.*
(see Education Department)

### EDUC 371: Literacy Essentials for Elementary Curriculum Design and Assessment

(1 Unit)
Prerequisites: EDUC 195 , EDUC 196 and permission of department.
Examines relevant research base and theory on early literacy acquisition and learning processes, assessments, and pedagogical approaches. Looks at culturally responsive pedagogy with children from a variety of cultural, economic, ethno-linguistic and racial backgrounds. Emphasizes the motivations, knowledge, practices, and strategies involved in teaching and learning. Requires planning and preparation, engagement in classroom environments, instruction in classroom environments, and formative and summative reflection. Twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers of

Lower Elementary (PK-3) Education, Early Childhood Quality Standards, and the Michigan Core Teaching Practices. This course is required for all K-12 French, German and Spanish majors. *Shanton.*

## Additional Requirements

- Study abroad in an approved off-campus program in the Spanish-speaking world.
- Residence in language-learning housing for at least one semester and successful completion of MLAC 110.
- Completion of the American Council on the Teaching of Foreign Languages' Oral Proficiency Interview (OPI) examination at an "Advanced Low" level of proficiency (or higher). Students should consult closely with the Modern Languages and Cultures Department and consider taking this examination directly after the study abroad experience.
- All courses for the major must be taken for a numerical grade.
- A maximum of one unit of Advanced Placement credit can count toward the major.
- Completion of Education Concentration

# Spanish: Latin American and Latino/a Studies, B.A.

## The major must be completed by a minimum of:

- Nine units of study at the 201-level or higher
- Ten units beginning at the 102 level

## At least 1 Spanish Class that deals with the history and cultures of Latinos in the United States.

These are the current offerings:

### SPAN 300: Spanish for Heritage Speakers

(1 Unit)
Prerequisite: Determined by Placement Exam or Instructor's Permission
The course is designed for students who were raised in a home where Spanish is spoken, who speak or understand Spanish, and are to some degree bilingual in English and Spanish. The course will include composition and conversation, with a focus on aspects of grammar and vocabulary that are of particular interest to heritage learners. Assignments will be based on a variety of readings about contemporary issues of importance to the Spanish-speaking world. Conducted in Spanish. Lecture *Staff*

### SPAN 307: Cultural Encounters: Caribbean, Central and North America

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor. Examines past, present and future struggles of cultural encounters and production in the Spanish-speaking Caribbean, Mexico and Central America. Explores cultural artifacts such as music, visual arts, performance arts, literature, popular culture and folklore from the legacy of the pre-Columbian period to the twenty-first century and considers this region's growing interaction with the United States. Conducted in Spanish. *Staff.*

### SPAN 362: Latinx Literature and Cultures in the United States

(1 Unit)
Proficiency Expected level of proficiency: SPAN 307 or SPAN 314 or SPAN 315, or permission of instructor.
Analysis of a special problem, topic, issue, phenomenon, period, author, genre or movement in U.S. Latino or Chicano literature and/or culture from its beginning to the present. Conducted in Spanish. *Staff.*

### SPAN 372: Afro-Latinx: TransAmerican Identities and Histories

(1 unit)
Proficiency Expected Level of proficiency - SPAN 306 or 307, or permission of instructor.
This course examines the black experience in Latin America, beginning with the TransAtlantic Slave Trade, up to contemporary social movements in the United States, Venezuela, Colombia, Cuba, Brazil, and the island of La Hispaniola (the Dominican Republic and Haiti). The content of the course will include literature, film, and music in Spanish, or translated to English from Haitian Creole and Portuguese. *Barrios*

## The remaining units to the major must be selected from Spanish classes at or above the 201-level.

## Additional Requirements

Off-Campus Study, which can be fulfilled by:

- Off-Campus program, internship, or reserach project in the United States that provides hands-on experience with U.S. Latinos/Hispanics or Latin American immigrants.
- Studying, doing an internship, or working in Latin America.
- Participation in The Philadelphia Center or The Border Studies Program.

A maximum of one unit of Advanced Placement credit can count toward the major.

All courses for the major must be taken for a numerical grade.

Participation in languge-learning housing for at least one semester and successful completion of MLAC 110.

## Electives for Heritage Speakers:

Native Speakers or students placing into Spanish 300: Spanish for Heritage Speakers (for students who grew up in a Spanish-speaking household or community) during their first year, have the option to take up to 2 electives outside the department.

Some possible offerings include:

### EDUC 338: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Humanities

(1/2 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in English and world languages (French, German and Spanish) in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke, Shanton.*

## EDUC 339: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Humanities

(1 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in English and world languages (French, German and Spanish) in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke, Shanton.*

## ETHN 370: Theories and Methods in Ethnic Studies

(1 Unit)
Prerequisite: ETHN 103 or permission of instructor.
Designed as a capstone course to integrate students' Internship and course work experiences and deepen their analytical understanding of issues related to race/ethnicity. Examines the development of ethnic and race relations, ethnic and race discrimination, and American identity using different multicultural theoretical perspectives. Includes field work and/or other research on a topic related to race/ethnicity. *Staff.*

## HIST 371: Latin American-U.S. Relations

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Explores essential elements that have shaped U.S. influence in Latin America from the 1820s to the present day, examining official policy as well as ideology, cultural representations, the media and trade issues. Considers this history from multiple perspectives, looking north and looking south, and how notions of race, religion and gender have played into inter-American relations. Analysis of primary source materials is integral. *Staff*

## HIST 300: Slave Societies of the Americas

(1 Unit)
Prerequisite: enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Comparative study of the development of race-based slavery in Spanish America, Brazil, the Caribbean and the U.S. South. Discusses the Middle Passage, plantation life, slave religion, resistance, emancipation and its aftermath. Invites students to consider the history of ethnic relations within multiracial societies. *Staff*

## HIST 301: Gender in Latin American History

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
how have conquest, race mixture, nation-building, consumer culture, and immigration impacted Latin American women and men? This seminar examines the lives of indigenous peasents, African slaves, Spanish nuns and priests, sorceresses, movie stars, and mothers and fathers throughout the Americas. *Staff*

## HIST 142: Modern Latin America History

(1 Unit)
An introduction to Latin America from independence in the 1820s to the present. Native Americans, slaves and European immigrants struggled with elites to form societies of "order and progress." Films and oral histories show how

the world economy affected working men and women and their responses: revolutions, religion, nationalism and popular politics. *Kanter*.

### MLAC 207: Race, Ethnicity and Diaspora in Latin America and the United States

(1 Unit)
This course explores the interconnected histories and cultures of Latin American nations and the United States. Special attention will be paid to the history, artistic production, and political movements of Indigenous populations, the African Diaspora, and immigrant groups throughout the Americas. *Staff.*

### RS 270: Liberation Theology

(1 Unit)
Examines Christian theological responses to poverty and social injustice emphasizing the theme of liberation. Includes analysis of liberation theology in 1960s Latin America and its influence on African American and feminist theologies in the U.S. Offered occasionally. *Mourad.*

Courses not listed here can be approved upon consultation with the department chair.

# Music

# Faculty

**Maureen Balke**, professor.
B.A., Marquette University; B.M., M.M., D.M. (vocal performance and pedagogy), Indiana University. Teachers and coaches include Lorna Warfield, Martha Lipton, Gianna d'Angelo and Carol Smith, Martin Katz, Elisabeth Schwarzkopf, Dalton Baldwin, Gerhard Hüsch. Post-doctoral studies at the CIFM International Music Institute in Nice, France; the Mozart Opera Studies Institute in Kaprun, Austria; the Aston Magna Academy on Schubert (NEH Fellowship); the Schubert Lied and Keyboard Festival, Westminster Choir College; and the International Festival of the Art Song. Certified Level III Somatic Voicework™—The LoVetri Method. Appointed 1988.

**David W. Abbott**, professor.
B.M., Eastman School of Music; M.M., The Juilliard School; D.M.A., Eastman School of Music. Appointed 2005.

**Lia Jensen-Abbott**, professor.
B.M. (piano performance), University of Nebraska-Lincoln; M.M., (piano performance and pedagogy), M.A. (music theory and music history), Pennsylvania State University; D.M.A. (piano performance), University of Nebraska-Lincoln; Performer Diploma, Indiana University. Appointed 2006

**Rufus Ferguson**, visiting assistant professor.
B.M., M.M., Western Michigan University (jazz studies and music performance). Appointed 2021

**Ji Hyun Kim**, Visiting assistant professor
B.M., Sydney Conservatorium of Music; M.M., D.M.A., Michigan State University (violin performance). Appointed 2021

**Clayton G. Parr**, professor.
B.A. (vocal performance), Albion College; Teaching Certificate, Michigan State University; M.M. (choral conducting), M.M. (vocal performance), D.M.A. (choral conducting), Michigan State University. Appointed 2012.

**David Valasek,** Director of
Bands
M.M., (percussion performance) Central Michigan University, BME, Central Michigan University

**Toni Myers,** Assistant Director of Bands

MM, Oklahoma City University, BME, Alma College

# Applied Music Faculty

**Nick Schumacher,** adjunct instructor,
clarinet.
B.M. University of Northern Iowa, M.M. Michigan State University, D.M.A. in progress, Michigan State University

**Matthew Kay,** adjunct instructor, trumpet.
B.M., University of Huddersfield; M.M., Houghton College; M.A., Michigan State University; D.M.A. Michigan State University.

**Nathan Wood**, adjunct instructor,
euphonium
B.M., Sam Houston State University, M.M., University of Central Arkansas, D.M.A., in progress, Michigan State
University

**Morgan Schulte**, color guard instructor.

**Emily Dierickx,** adjunct instructor,
flute.
B.M. Michigan State University, M.M. The Ohio State University, D.M.A. University of Miami, Frost School of Music

**Robert Livingston,** adjunct instructor, music ed

**Jenny Ribeiro,** adjunct instructor, voice/opera workshop.
B.M., (voice performance) Central Washington University, M.M. (voice performance) Michigan State University

**Robert Doyle,** adjunct instructor, voice.
B.M., Michigan State University; M.M., University of Texas, Austin; M.M. candidate in organ and church music, University of Michigan. Certified Level III Somatic Voicework™—The LoVetri Method.

**Cynthia Duda**, adjunct instructor, bassoon.
B.M., Bowling Green State University; M.M., Western Michigan University; D.M.A. candidate, Michigan State University.

**Ellen Grafius**, adjunct instructor, harp.
B.M.E., Michigan State University.

**Nicholas Laban**, staff accompanist.
B.A., Albion College; M.M., Western Michigan University.

**Mark Mathias**, adjunct instructor, double bass.
B.M., University of Michigan; M.F.A., Eastern Michigan University.

**Daniel Palmer**, adjunct instructor, guitar.
B.A., Albion College; M.M., University of Toledo.

**Gabriel Renteria**, adjunct instructor, oboe.
B.M., Oberlin Conservatory; M.M., University of Washington.

**Elena Melinda Solero**, accompanist.
B.M., DePauw University; M.M., Bowling Green State University.

**Sandro Sidamonidze**, adjunct instructor, cello
M.M. in progress, Michigan State University

**Nathan Salazar,** adjunct instructor, saxophone.
B.M., Arizona State University; M.M. in progress Michigan State University

**Stacey Root,** adjunct instructor, music
ed
B.A. Michigan State University, M.A. in music education, Michigan State University

# Introduction

Music is one of the oldest disciplines in the liberal arts, and thus represents one of the traditional fields of knowledge. Integration with other disciplines is represented well within the department, for music brings people in contact with great literature such as drama and poetry, with dance, with historical and sociological trends, and with religious and philosophical ideas.

One of the most important contributions provided by the Music Department is the opportunity for self-expression, either individually or with others. The stimulation and enjoyment derived from music springs from study, self-examination and criticism, discipline, knowledge of other disciplines that bear upon musical interpretation, and a desire to achieve excellence. These are liberating, civilizing, sensitizing influences upon humanity in any age and in any place; they help prepare students for rich and rewarding lives.

The philosophy and mission of Albion College are reflected in four primary goals of the Music Department: (1) To be an artistic presence on the campus and to share the rich heritage of great music with students, faculty and community; (2) To expose students to and involve them with the creative process through music, to heighten students' sensitivity to themselves and others, and to introduce them to a broad range of significant music; (3) To develop an understanding of music, impart knowledge of music and increase musical skills by means of courses offered within the framework of the liberal arts; (4) To provide courses and curricula for music majors so they may have the necessary foundation for graduate study, teaching, performing, or other career-oriented goals.

The Music Department offers courses for a broad range of students—from those who aspire to a musical career to those who wish to develop their avocational interests in music. Membership in all performing ensembles and opportunities for private music lessons are open to all students regardless of major. Albion has an excellent library of books, musical

scores, recordings and stereo listening equipment—all available for student use. Albion College is an accredited institutional member of the National Association of Schools of Music.

The Music Department offers three music curricula: (1) music major; (2) music major with performance emphasis; and (3) music major with music education emphasis. These programs are listed below with an explanation of the purpose and the requirements for each.

Music Department Website

# Career Opportunities

Career possibilities for Albion music graduates include public and private school teaching, private teaching, music or arts management, church music and professional performance. Many of our music graduates elect to attend graduate school to further prepare themselves for their chosen careers.

# Special Features

Interested students may take advantage of off-campus study and apprenticeships made available through the GLCA in New York and Philadelphia. Foreign study is available as well.

Vocal students are regularly sent to state and regional National Association of Teachers of Singing (NATS) competitions. They also take part in a musical and/or opera workshop on an annual basis. Opportunities for instrumentalists include the Intercollegiate Honor Band.

# Student Learning Outcomes

**Student learning outcomes – B. A. in music (8 units)**

1. Students will grow in artistic expression on a principal instrument/voice as developed through diverse repertoire studies in individual and ensemble performance, practicing, and sight-reading experiences.
2. Students will demonstrate understanding of essential theoretical and structural concepts in music through written analysis, aural perception, improvisation, and application at the piano keyboard.
3. Students will demonstrate familiarity with essential stylistic elements in music from a variety of historical periods, national origins, and genres through and analysis.
4. Students will be able to place elements of musical works into their historical, cultural, and/or social context.

**Student Learning outcomes – B. A. in Music with Performance (12.5 units)**

1-4 as above, plus:

5. Students will demonstrate proficiency on principal instrument/voice through two public solo recital performances.
6. Students will demonstrate reflection on background and context of musical works performed through the production of written program notes.

**Student Learning outcomes – B. A. in Music Education (12.5 units)**

1-4 as above, plus:

5. Students will demonstrate proficiency on principal instrument/voice through a public solo recital performance.
6. Students will demonstrate knowledge and skills to teach music to K-12 students in developmentally appropriate ways and in a variety of classroom and ensemble settings.
7. Students will be able to effectively manage music classrooms and instruction.
8. Students will be able to use technology in music teaching in a variety of applications.

CREATIVE THINKING: Students will be able to grow in artistic expression on their principal instrument/voice and synthesize ideas that cross disciplinary boundaries in creative or novel ways.

CRITICAL THINKING: Students will be able to demonstrate understanding of theoretical and structural concepts in music and/or familiarity with stylistic elements in varied historical musical periods and develop conclusions to place elements of music into historical, cultural, and/or social context based on comprehensive exploration and analysis of issues, ideas, and artifacts.

# Music, B.A.

## Requirements for Major (8 units)

The eight-unit liberal arts music major is for students who have strong musical interests but who do not necessarily intend to pursue a full-time professional career in music. This major may not be used as a major in the elementary or secondary education program. Students interested in teaching music in the public schools should enroll in the 12 1/2 unit music major with music education emphasis. Students should begin their study by enrolling in the following courses in the fall: MUS 100, MUS 104, an applied music lesson (one-half unit) and a departmental ensemble. If enrolling in the ensemble for credit will cause a student to exceed 4.5 units the ensemble may be audited. Students must enroll in an ensemble, for either 0.0 or 0.25 units, each semester in residence.

## Students Selecting This Curriculum Must Complete Eight Units in Music as Follows:

- Two units in applied music (private lessons). These must be taken for credit (either for 0.25 or 0.5 unit; 0.5 unit is recommended). One-half unit in conducting may be substituted for one-half unit in applied music by permission of music staff.
- All courses for the major must be taken for a numerical grade.

## Four Units in Music Foundations:

### MUS 104: Gateway to Music

(1 unit)
This course will introduce students to the study of basic structural elements of music through analytic listening, notation, composition and in-class performance. Basic elements of music reading will be introduced. Musical examples will be drawn from a variety of styles: Western, classical, jazz/blues, rock/pop/R&B, and world music styles. *Parr, Staff*

### MUS 203: Foundations of Music 1

1 Unit
Prerequisites: MUS 104 with a grade of 2.0 or higher or by departmental permission
Corequisites: MUS 203L based on audition or permission of instructor
A continuation of the study of Western musical language through music fundamentals (key signatures, scales, intervals, rhythmic notation, etc., species counterpoint, melodic structure and embellishment, diatonic chord function and basic four-part harmonization). In addition, chordal part-writing will concern much of this semester's work. Written examinations, compositional exercises, sight-singing and ear training will constitute a significant portion of this course, as well as composition projects. *Staff*

### MUS 204: Foundations of Music 2

1 Unit
Prerequisites: MUS 203 with a Grade of 2.0 or higher
Corequisites: MUS 204L based on audition or permission of instructor
The study of western and non-western musical language beyond music fundamentals. By developing an understanding of tonal and non-tonal musical language through melodic structure, chromatic chord structures, embellishment patterns, tonal progressions, counterpoint, part-writing, composition, sight-singing, and dictation activities, students will be able to hear, sing, improvise, and compose tonal and non-tonal progressions. Furthermore, students will begin to experience chromatic harmonic tendencies, modes and other scale structures, as well as engage with cross-historical references to a diversity of musical genres in their listening, singing, and writing activities. *Staff*

### MUS 303: Foundations of Music 3

1 Unit
Prerequisites: MUS 204 with a grade of 2.0 or higher
The study of western and non-western musical historical periods, genres, and styles. By developing an understanding of tonal and non-tonal musical language through listening, critical score analysis, as well as performance and scholarly research activities, students will be able to hear and critically discuss distinct musical styles and catalogue/describe them into appropriate generic, chronological, and structural categories. Students will also engage with cross-historical references to a diversity of musical genres in their listening, performing, and writing/research activities. *Staff*

## Two Units in Music Electives as follows (at least one unit from List A):

## List A - Building on Core Studies

### MUS 111: Music Appreciation

(1 Unit)
Designed for the non-music major who wishes to gain an appreciation of music as a fine art. The musical elements of style, form and design are investigated primarily through listening. Not open to music majors. *Staff.*

### MUS 113: Introduction to Opera

(1 Unit)
An introductory course designed for both the music major and non-major. Concentrates on the most frequently performed operas of Mozart, Puccini, Verdi and Wagner. Extensive use of video tapes of opera performances with sub-titles. Offered in alternate years. *Balke.*

### MUS 120: Music Performance as a Creative Process

(1 Unit)
Corequisites: MUS 121, MUS 122, MUS 124, MUS 125, MUS 131 or MUS 132.
Designed to give students the tools necessary to think, discuss and write critically about music both within and outside of their respective ensemble "labs." Through reading, writing and listening assignments, students will become more aware of the elements involved in musical interpretation. *McIlhagga.*

## MUS 202: Theory II

(1 Unit)
Prerequisite: MUS 201 or permission of instructor.
A continuation of the studies begun in MUS 101, MUS 102 and MUS 201 with a special emphasis on form. An introduction to the materials and techniques of twentieth and twenty-first-century music. Sight-singing and ear-training continue. A major analysis paper is required. *Jensen-Abbott.*

## MUS 216: Piano Literature

(1/2 Unit)
An historical, melodic, and harmonic overview of some of the major piano works by the most significant composers of the seventeenth through twenty-first centuries. Designed to enhance a music major's understanding of works considered to be the standards in piano and chamber music. Offered in alternate years. *Jensen-Abbott.*

## MUS 217: Instrumental Literature

(1/2 Unit)
An historical, melodic, and harmonic overview of some of the major instrumental musical works by the most significant composers of the seventeenth through twenty-first centuries. Designed to enhance a music major's understanding of works considered to be the standards in orchestral, band and chamber music. Offered in alternate years. *McIlhagga.*

## MUS 218: Choral Literature

(1/2 Unit)
An historical, melodic, and harmonic overview of some of the major choral works by the most significant composers of the seventeenth through twenty-first centuries. Designed to enhance a music major's understanding of works considered to be the standards in choral music. Offered in alternate years. *Parr.*

## MUS 230: Introduction to Conducting

(1/2 Unit)
Prerequisite: MUS 204 or permission of instructor.
Fundamentals of conducting vocal and instrumental ensembles. (1) basic beat patterns; (2) score analysis; (3) instrument and voice ranges and transpositions; and (4) some practical aspects of rehearsing. Lecture and laboratory. *Staff*

## MUS 314: Music History II

(1 Unit)
Prerequisite: MUS 201 or permission of instructor.
A continuation of MUS 313 covering music from the eighteenth century to the present. In addition to examinations and analysis assignments, students complete a major research paper by the end of the semester that investigates some aspect of contemporary Western music or deal with non-Western music. *Abbott.*

## MUS 319: Evolution of Jazz

(1 Unit)
An exploration of the rich cultural background and evolution of jazz music through discussion of important performers, composers, educators and critics with respect to their contribution to the development of the art form. Emphasis is placed on developing critical listening skills through the extensive use of landmark recordings and live performances. Offered in alternate years. *Ball.*

## MUS 330: Choral Conducting

(1/2 Unit)
Prerequisite: MUS 230.
Laboratory work in choral conducting and score reading with practical experience in techniques of training choral ensembles. Required of all choral music education majors. Offered in alternate years. *Parr.*

## MUS 331: Instrumental Conducting

(1/2 Unit)
Prerequisite: MUS 230.
Laboratory work to develop techniques and skills required for instrumental conducting and score reading. Students may be given the opportunity to conduct instrumental ensembles on campus. Required of all instrumental music education majors. Offered in alternate years. *Ball.*

## MUS 401: Seminar

(1/2 Unit)
*Staff.*

# List B - Vocational/Pedagogical/Performance Practice/Interdisciplinary

## MUS 110: Rock-and-Roll in Society

(1 Unit)
Study of the origins, characteristics and stylistic development of rock-and-roll music from the early 1950s to the present through the frameworks of race, gender/ethnicity, politics, and popular culture. Designed for the non-music major. Course fee. *McIlhagga.*

## MUS 133: Opera Workshop

(1/2 Unit)
Provides opportunity for involvement in the production of operas or opera scenes from auditions through performance. Covers all aspects of opera from vocal roles to technical support. Offered in alternate years. *Staff.*

## MUS 137: Piano Chamber Music Ensemble

(1/4 Unit)
Prerequisites: Music major and permission of instructor.
Develops ensemble skills for pianists playing in duos with a second pianist or in mixed ensembles such as trios for piano and strings, etc. Topics include balance, rhythmic precision and pedaling, as well as overall phrasing and interpretation. *Abbott, Jensen-Abbott.*

## MUS 205: Jazz Improvisation

(1 Unit)
Prerequisite: MUS 101 recommended.
An introduction to the art and craft of jazz improvisation through a study of the theoretical, historical, philosophical and aesthetic factors surrounding its past, present and future performance practice. Course material is designed to develop thinking and reacting skills needed for performance through assignments in repertoire, scales, keyboard harmony skills and melodic patterns. Offered in alternate years. *Ball.*

## MUS 220: Diction for Singers

(1/2 Unit)
A concentrated course on the basics of the International Phonetic Alphabet (IPA) including application of this system to the correct stage pronunciation and artistic performance of standard classical solo repertoire (art song, opera) in English, Italian, German and French. *Balke.*

## MUS 221: Diction for Singers

(1 Unit)
A concentrated course on the basics of the International Phonetic Alphabet (IPA) including application of this system to the correct stage pronunciation and artistic performance of standard classical solo repertoire (art song, opera) in English, Italian, German and French. *Balke.*

## MUS 240: Brass Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all brass instruments including trumpet, French horn, trombone, euphonium and tuba. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Otto.*

## MUS 242: Woodwind Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all woodwind instruments including flute, oboe, clarinet, bassoon and saxophone. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Miller.*

## MUS 244: Stringed Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all bowed string instruments including violin, viola, cello, and string bass. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Abo.*

## MUS 246: Percussion Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all percussion instruments including snare drum, timpani, mallet instruments, as well as most other percussion instruments utilized in an instrumental ensemble.

Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Wulff.*

### MUS 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### MUS 322: Teaching of Instrumental Music in the Schools

(1 Unit)
Prerequisite: MUS 230.
Required of all instrumental music education majors. Designed to acquaint the student with all aspects of teaching, developing, planning, directing and administering public school instrumental music programs, K-12. Offered in alternate years. *McIlhagga.*

### MUS 325: Teaching of Music in the Elementary School

(1 Unit)
Prerequisite: MUS 230.
Designed to give the student a knowledge of a well-rounded music program for the elementary grades. Creative experiences, demonstrations and practical work in performing and listening are stressed. Lecture and laboratory. Offered in alternate years. *Root.*

### MUS 328: Teaching of Choral Music in the Secondary School

(1 Unit)
Prerequisite: MUS 230; MUS 330 is strongly recommended.
An introduction to all aspects of the music program for the secondary school and the techniques for administering the program. Lecture and laboratory. It is strongly recommended that Music 330 (Choral Conducting) be elected prior to 328. Offered in alternate years. *Parr.*

### MUS 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## In Addition:

- Students are expected to take applied music lessons each semester they are in residence.
- Students are required to participate in at least one of the major performing organizations most appropriate to their primary performance medium (marching/symphonic band, orchestra, choir, jazz ensemble) each semester the student is enrolled in this curriculum. Keyboard performers may satisfy this requirement through accompanying; guitarists should make special arrangements with the chair of the Music Department.
- Students at the senior level will present at least a half solo recital, or combination solo recital and small ensemble performance in which he or she is a participant in solo capacity. With permission from the music faculty, students may substitute an appropriate capstone project for the recital requirement.
- Successful completion of MUS 100 Music Major Seminar (0 unit), 6 out of 8 semesters.
- Successful completion of the keyboard laboratories in the following will satisfy the piano proficiency requirement.

### MUS 104: Gateway to Music

(1 unit)
This course will introduce students to the study of basic structural elements of music through analytic listening, notation, composition and in-class performance. Basic elements of music reading will be introduced. Musical examples will be drawn from a variety of styles: Western, classical, jazz/blues, rock/pop/R&B, and world music styles. *Parr, Staff*

### MUS 203: Foundations of Music 1

1 Unit
Prerequisites: MUS 104 with a grade of 2.0 or higher or by departmental permission
Corequisites: MUS 203L based on audition or permission of instructor
A continuation of the study of Western musical language through music fundamentals (key signatures, scales, intervals, rhythmic notation, etc., species counterpoint, melodic structure and embellishment, diatonic chord function and basic four-part harmonization). In addition, chordal part-writing will concern much of this semester's work. Written examinations, compositional exercises, sight-singing and ear training will constitute a significant portion of this course, as well as composition projects. *Staff*

### MUS 204: Foundations of Music 2

1 Unit
Prerequisites: MUS 203 with a Grade of 2.0 or higher
Corequisites: MUS 204L based on audition or permission of instructor
The study of western and non-western musical language beyond music fundamentals. By developing an understanding of tonal and non-tonal musical language through melodic structure, chromatic chord structures, embellishment patterns, tonal progressions, counterpoint, part-writing, composition, sight-singing, and dictation activities, students will be able to hear, sing, improvise, and compose tonal and non-tonal progressions. Furthermore, students will begin to experience chromatic harmonic tendencies, modes and other scale structures, as well as engage with cross-historical references to a diversity of musical genres in their listening, singing, and writing activities. *Staff*

# Music, Music Education Emphasis with Education Concentration, B.A.

## Requirements for Major with Music Education Emphasis (12 1/2 units)

The major with music education emphasis provides certification for students who intend to teach music in grades K-12 for private and public schools. Students should begin their study by enrolling in the following courses in the fall: MUS 100, MUS 104, an applied music lesson (one-half unit) and a departmental ensemble. If enrolling in the ensemble for credit will cause a student to exceed four and one-half units the ensemble may be audited.

Students selecting this curriculum must complete 12 1/2 units in music and other requirements as follows, including the minor in applied music as described below:

## Major

## Four Units in Music Foundations:

## MUS 104: Gateway to Music

(1 unit)
This course will introduce students to the study of basic structural elements of music through analytic listening, notation, composition and in-class performance. Basic elements of music reading will be introduced. Musical examples will be drawn from a variety of styles: Western, classical, jazz/blues, rock/pop/R&B, and world music styles. *Parr, Staff*

## MUS 203: Foundations of Music 1

1 Unit
Prerequisites: MUS 104 with a grade of 2.0 or higher or by departmental permission
Corequisites: MUS 203L based on audition or permission of instructor
A continuation of the study of Western musical language through music fundamentals (key signatures, scales, intervals, rhythmic notation, etc., species counterpoint, melodic structure and embellishment, diatonic chord function and basic four-part harmonization). In addition, chordal part-writing will concern much of this semester's work. Written examinations, compositional exercises, sight-singing and ear training will constitute a significant portion of this course, as well as composition projects. *Staff*

## MUS 204: Foundations of Music 2

1 Unit
Prerequisites: MUS 203 with a Grade of 2.0 or higher
Corequisites: MUS 204L based on audition or permission of instructor
The study of western and non-western musical language beyond music fundamentals. By developing an understanding of tonal and non-tonal musical language through melodic structure, chromatic chord structures, embellishment patterns, tonal progressions, counterpoint, part-writing, composition, sight-singing, and dictation activities, students will be able to hear, sing, improvise, and compose tonal and non-tonal progressions. Furthermore, students will begin to experience chromatic harmonic tendencies, modes and other scale structures, as well as engage with cross-historical references to a diversity of musical genres in their listening, singing, and writing activities. *Staff*

## MUS 303: Foundations of Music 3

1 Unit
Prerequisites: MUS 204 with a grade of 2.0 or higher
The study of western and non-western musical historical periods, genres, and styles. By developing an understanding of tonal and non-tonal musical language through listening, critical score analysis, as well as performance and scholarly research activities, students will be able to hear and critically discuss distinct musical styles and catalogue/describe them into appropriate generic, chronological, and structural categories. Students will also engage with cross-historical references to a diversity of musical genres in their listening, performing, and writing/research activities. *Staff*

# Music Seminar:

## MUS 401: Seminar

(1/2 Unit)
*Staff.*

# Three Units in Music Electives as follows (at least one unit must be from List A below)

Instrumental music education majors must include MUS 217; choral music education majors must include MUS 218.

## List A - Building on Core Studies

### MUS 111: Music Appreciation

(1 Unit)
Designed for the non-music major who wishes to gain an appreciation of music as a fine art. The musical elements of style, form and design are investigated primarily through listening. Not open to music majors. *Staff.*

### MUS 113: Introduction to Opera

(1 Unit)
An introductory course designed for both the music major and non-major. Concentrates on the most frequently performed operas of Mozart, Puccini, Verdi and Wagner. Extensive use of video tapes of opera performances with sub-titles. Offered in alternate years. *Balke.*

### MUS 120: Music Performance as a Creative Process

(1 Unit)
Corequisites: MUS 121, MUS 122, MUS 124, MUS 125, MUS 131 or MUS 132.
Designed to give students the tools necessary to think, discuss and write critically about music both within and outside of their respective ensemble "labs." Through reading, writing and listening assignments, students will become more aware of the elements involved in musical interpretation. *McIlhagga.*

### MUS 314: Music History II

(1 Unit)
Prerequisite: MUS 201 or permission of instructor.
A continuation of MUS 313 covering music from the eighteenth century to the present. In addition to examinations and analysis assignments, students complete a major research paper by the end of the semester that investigates some aspect of contemporary Western music or deal with non-Western music. *Abbott.*

### MUS 319: Evolution of Jazz

(1 Unit)
An exploration of the rich cultural background and evolution of jazz music through discussion of important performers, composers, educators and critics with respect to their contribution to the development of the art form. Emphasis is placed on developing critical listening skills through the extensive use of landmark recordings and live performances. Offered in alternate years. *Ball.*

### MUS 216: Piano Literature

(1/2 Unit)
An historical, melodic, and harmonic overview of some of the major piano works by the most significant composers of the seventeenth through twenty-first centuries. Designed to enhance a music major's understanding of works considered to be the standards in piano and chamber music. Offered in alternate years. *Jensen-Abbott.*

### MUS 217: Instrumental Literature

(1/2 Unit)
An historical, melodic, and harmonic overview of some of the major instrumental musical works by the most significant composers of the seventeenth through twenty-first centuries. Designed to enhance a music major's understanding of works considered to be the standards in orchestral, band and chamber music. Offered in alternate years. *McIlhagga.*

### MUS 218: Choral Literature

(1/2 Unit)
An historical, melodic, and harmonic overview of some of the major choral works by the most significant composers of the seventeenth through twenty-first centuries. Designed to enhance a music major's understanding of works considered to be the standards in choral music. Offered in alternate years. *Parr.*

## List B - Vocational/Pedagogical/Performance Practice/Interdisciplinary

### MUS 104: Gateway to Music

(1 unit)
This course will introduce students to the study of basic structural elements of music through analytic listening, notation, composition and in-class performance. Basic elements of music reading will be introduced. Musical examples will be drawn from a variety of styles: Western, classical, jazz/blues, rock/pop/R&B, and world music styles. *Parr, Staff*

### MUS 205: Jazz Improvisation

(1 Unit)
Prerequisite: MUS 101 recommended.
An introduction to the art and craft of jazz improvisation through a study of the theoretical, historical, philosophical and aesthetic factors surrounding its past, present and future performance practice. Course material is designed to develop thinking and reacting skills needed for performance through assignments in repertoire, scales, keyboard harmony skills and melodic patterns. Offered in alternate years. *Ball.*

### MUS 221: Diction for Singers

(1 Unit)
A concentrated course on the basics of the International Phonetic Alphabet (IPA) including application of this system to the correct stage pronunciation and artistic performance of standard classical solo repertoire (art song, opera) in English, Italian, German and French. *Balke.*

### MUS 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### MUS 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### MUS 133: Opera Workshop

(1/2 Unit)
Provides opportunity for involvement in the production of operas or opera scenes from auditions through performance. Covers all aspects of opera from vocal roles to technical support. Offered in alternate years. *Staff.*

## MUS 220: Diction for Singers

(1/2 Unit)
A concentrated course on the basics of the International Phonetic Alphabet (IPA) including application of this system to the correct stage pronunciation and artistic performance of standard classical solo repertoire (art song, opera) in English, Italian, German and French. *Balke.*

## MUS 137: Piano Chamber Music Ensemble

(1/4 Unit)
Prerequisites: Music major and permission of instructor.
Develops ensemble skills for pianists playing in duos with a second pianist or in mixed ensembles such as trios for piano and strings, etc. Topics include balance, rhythmic precision and pedaling, as well as overall phrasing and interpretation. *Abbott, Jensen-Abbott.*

## MUS 240: Brass Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all brass instruments including trumpet, French horn, trombone, euphonium and tuba. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Otto.*

## MUS 242: Woodwind Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all woodwind instruments including flute, oboe, clarinet, bassoon and saxophone. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Miller.*

## MUS 244: Stringed Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all bowed string instruments including violin, viola, cello, and string bass. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Abo.*

## MUS 246: Percussion Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all percussion instruments including snare drum, timpani, mallet instruments, as well as most other percussion instruments utilized in an instrumental ensemble. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Wulff.*

(0.5 units beyond the 1.5 techniques courses required below)

### MUS 322: Teaching of Instrumental Music in the Schools

(1 Unit)
Prerequisite: MUS 230.
Required of all instrumental music education majors. Designed to acquaint the student with all aspects of teaching, developing, planning, directing and administering public school instrumental music programs, K-12. Offered in alternate years. *McIlhagga.*

OR

### MUS 328: Teaching of Choral Music in the Secondary School

(1 Unit)
Prerequisite: MUS 230; MUS 330 is strongly recommended.
An introduction to all aspects of the music program for the secondary school and the techniques for administering the program. Lecture and laboratory. It is strongly recommended that Music 330 (Choral Conducting) be elected prior to 328. Offered in alternate years. *Parr.*

(1 unit beyond methods course required below)

## Minor in Applied Music

(required for teaching certificate for music education majors)

Five units in specialized music performance courses, including three and one-half units in applied music (at least three units must be in a single performing area); one-half unit in voice/piano/guitar classes; Specific recommendations for students whose principal performing area is keyboard, voice or an instrument are available from the Music Department.

- During any semester that an off-campus program is elected, students are expected to arrange to take applied study as necessary to meet the 3.5 unit applied music minimum.

## One-half Unit In:

### MUS 230: Introduction to Conducting

(1/2 Unit)
Prerequisite: MUS 204 or permission of instructor.
Fundamentals of conducting vocal and instrumental ensembles. (1) basic beat patterns; (2) score analysis; (3) instrument and voice ranges and transpositions; and (4) some practical aspects of rehearsing. Lecture and laboratory. *Staff*

## One-half Unit In:

### MUS 330: Choral Conducting

(1/2 Unit)
Prerequisite: MUS 230.
Laboratory work in choral conducting and score reading with practical experience in techniques of training choral ensembles. Required of all choral music education majors. Offered in alternate years. *Parr.*

### MUS 331: Instrumental Conducting

(1/2 Unit)
Prerequisite: MUS 230.
Laboratory work to develop techniques and skills required for instrumental conducting and score reading. Students may be given the opportunity to conduct instrumental ensembles on campus. Required of all instrumental music education majors. Offered in alternate years. *Ball.*

## Teacher Certification Requirements

Students in this curriculum must complete the required units of professional education courses taken through the Shurmur Center. **(Certification for secondary vocal music education alone requires one unit less than the K-12 music certification. Students interested in this alternative should contact the Music Department for specific details.)**

## Vocal Students Must Elect:

### MUS 325: Teaching of Music in the Elementary School

(1 Unit)
Prerequisite: MUS 230.
Designed to give the student a knowledge of a well-rounded music program for the elementary grades. Creative experiences, demonstrations and practical work in performing and listening are stressed. Lecture and laboratory. Offered in alternate years. *Root.*

### MUS 328: Teaching of Choral Music in the Secondary School

(1 Unit)
Prerequisite: MUS 230; MUS 330 is strongly recommended.
An introduction to all aspects of the music program for the secondary school and the techniques for administering the program. Lecture and laboratory. It is strongly recommended that Music 330 (Choral Conducting) be elected prior to 328. Offered in alternate years. *Parr.*

### EDUC 110: Exploring Teaching Colloquium

.25 unit
Exploration of educational careers and options for teacher certification. Students will document a minimum of ten hours of clinical experience observing in varied educational settings and grade levels. *Staff*

### EDUC 195: Education Foundations: Access, Equity and Advocacy

1 Unit
Introductory course for students interested in exploring the field of education, TESL, and PK-12 education with teacher certification. An overview of the historical, social, political, multicultural, and philosophical foundations of education. Provides the larger conceptual perspectives necessary for studying teaching, learning and education and critically examines the power relationships among teachers, schools and society. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers PK-12, the Michigan Core Teaching Practice with explicit emphasis on building relationships and creating equitable learning environments for ethnolinguistically diverse students. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to

the Education Department. Students are responsible for the $10 ICHAT fee. Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. *Staff*

## EDUC 196: Learner-Centered Approaches, Supports and Technologies

1 Unit
Prerequisites: EDUC 195 and a minimum cumulative GPA of 2.5.
Introductory course for students interested in PK-12 education with teacher certification. Emphasizes understanding and application of learner-centered approaches, supports and technologies as well as social-emotional learning. These are essential in understanding and supporting personal and professional growth, as well as in understanding diverse PK-12 learners and the development of the whole child. These will be explored in greater depth in all subsequent education courses. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for the Preparation of Teachers PK-12, Early Childhood Quality Standards, the Michigan Core Teaching Practices and special education. *Staff*

## EDUC 300: Eligibility for Teacher Certification

.25 unit
Prerequisites: EDUC 195, 196 and permission of department.
Eligibility for teacher certification requires completion of many steps, including successful passage of Michigan Tests for Teacher Certification (American Council on the Teaching of Languages Oral Proficiency Interview also required for world language teachers). This course will provide students with the skills to take initiative in planning and accessing resources. Students may choose to take this course more than one time. *Staff*

## EDUC 373: Literacy Pedagogy in Secondary Schools

(1 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Examines literacy pedagogy in the secondary content areas. Field experiences in public school classrooms provide opportunities to observe learners and to practice the skills, methods, and strategies for teaching content literacy. Should be taken the semester prior to student teaching. *Henke, Staff.*

## EDUC 396: Boundary Crossings in Elementary Schools

(1 Unit)
Prerequisites: EDUC 202, EDUC 203.
Focuses on learning about and working in the Albion Public Schools with children/youth from different backgrounds. Combines curriculum and classroom management theory and practice, and emphasizes exploring and developing integrative and creative teaching skills before doing the student teaching semester. Note: This Maymester course/experience begins during the spring semester and extends for three and one-half weeks after the spring semester for all junior elementary teacher education students. *Shanton, Staff.*

## EDUC 423: Student Teaching, Kindergarten through Grade 12 (K-12)

(3 Units)
Prerequisites: All K-12 education concentration courses need to be completed. Advising and permission from department.
Internship is completed in multiple grade levels (e.g., 6-8 & 9-12; K-5 & 9-12), under the supervision of a recommended and tenured teacher. Clinical experiences begin the first day of the semester, and ends on the penultimate week of classes. Support for and engagement in a student teaching internship are integral to the course. On-site

guidance and supervision by a clinical experience supervisor occurs a minimum of five times across the semester. Instructor of record for the student teaching seminar provides regular support for student teachers enrolled in the internship. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee (but can be reimbursed by the Shurmur Center). Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. Offered on a credit/no credit basis. Offered on a credit/no credit basis. *Staff.*

### EDUC 432: Seminar: Secondary Student Teaching

(1 Unit)
Prerequisite: Permission of department.
A capstone course reflecting on practice in the classroom. Focuses on professional development, portfolio design, technology integration and classroom management. Taken concurrently during student teaching semester. *Henke.*

### PSYC 251: Child and Adolescent Development

(1 Unit)
Prerequisite: PSYC 101.
Focuses on physical, cognitive, social and emotional development with emphasis on the periods of infancy, childhood and adolescence. Reviews methods for studying the developing person and major theoretical approaches. *Elischberger, Francis, Keyes, Staff.*

## Plus One and One-half Units Selected From:

### MUS 240: Brass Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all brass instruments including trumpet, French horn, trombone, euphonium and tuba. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Otto.*

### MUS 242: Woodwind Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all woodwind instruments including flute, oboe, clarinet, bassoon and saxophone. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Miller.*

### MUS 244: Stringed Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all bowed string instruments including violin, viola, cello, and string bass. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Abo.*

### MUS 246: Percussion Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all percussion instruments including snare drum,

timpani, mallet instruments, as well as most other percussion instruments utilized in an instrumental ensemble. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Wulff.*

## Instrumental Students Must Elect:

### MUS 322: Teaching of Instrumental Music in the Schools

(1 Unit)
Prerequisite: MUS 230.
Required of all instrumental music education majors. Designed to acquaint the student with all aspects of teaching, developing, planning, directing and administering public school instrumental music programs, K-12. Offered in alternate years. *McIlhagga.*

### MUS 325: Teaching of Music in the Elementary School

(1 Unit)
Prerequisite: MUS 230.
Designed to give the student a knowledge of a well-rounded music program for the elementary grades. Creative experiences, demonstrations and practical work in performing and listening are stressed. Lecture and laboratory. Offered in alternate years. *Root.*

### EDUC 110: Exploring Teaching Colloquium

.25 unit
Exploration of educational careers and options for teacher certification. Students will document a minimum of ten hours of clinical experience observing in varied educational settings and grade levels. *Staff*

### EDUC 195: Education Foundations: Access, Equity and Advocacy

1 Unit
Introductory course for students interested in exploring the field of education, TESL, and PK-12 education with teacher certification. An overview of the historical, social, political, multicultural, and philosophical foundations of education. Provides the larger conceptual perspectives necessary for studying teaching, learning and education and critically examines the power relationships among teachers, schools and society. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers PK-12, the Michigan Core Teaching Practice with explicit emphasis on building relationships and creating equitable learning environments for ethnolinguistically diverse students. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee. Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. *Staff*

### EDUC 196: Learner-Centered Approaches, Supports and Technologies

1 Unit
Prerequisites: EDUC 195 and a minimum cumulative GPA of 2.5.
Introductory course for students interested in PK-12 education with teacher certification. Emphasizes understanding and application of learner-centered approaches, supports and technologies as well as social-emotional learning. These are essential in understanding and supporting personal and professional growth, as well as in understanding diverse PK-12 learners and the development of the whole child. These will be explored in greater depth in all subsequent education

courses. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for the Preparation of Teachers PK-12, Early Childhood Quality Standards, the Michigan Core Teaching Practices and special education. *Staff*

## EDUC 300: Eligibility for Teacher Certification

.25 unit
Prerequisites: EDUC 195, 196 and permission of department.
Eligibility for teacher certification requires completion of many steps, including successful passage of Michigan Tests for Teacher Certification (American Council on the Teaching of Languages Oral Proficiency Interview also required for world language teachers). This course will provide students with the skills to take initiative in planning and accessing resources. Students may choose to take this course more than one time. *Staff*

## EDUC 373: Literacy Pedagogy in Secondary Schools

(1 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Examines literacy pedagogy in the secondary content areas. Field experiences in public school classrooms provide opportunities to observe learners and to practice the skills, methods, and strategies for teaching content literacy. Should be taken the semester prior to student teaching. *Henke, Staff.*

## EDUC 396: Boundary Crossings in Elementary Schools

(1 Unit)
Prerequisites: EDUC 202, EDUC 203.
Focuses on learning about and working in the Albion Public Schools with children/youth from different backgrounds. Combines curriculum and classroom management theory and practice, and emphasizes exploring and developing integrative and creative teaching skills before doing the student teaching semester. Note: This Maymester course/experience begins during the spring semester and extends for three and one-half weeks after the spring semester for all junior elementary teacher education students. *Shanton, Staff.*

## EDUC 423: Student Teaching, Kindergarten through Grade 12 (K-12)

(3 Units)
Prerequisites: All K-12 education concentration courses need to be completed. Advising and permission from department.
Internship is completed in multiple grade levels (e.g., 6-8 & 9-12; K-5 & 9-12), under the supervision of a recommended and tenured teacher. Clinical experiences begin the first day of the semester, and ends on the penultimate week of classes. Support for and engagement in a student teaching internship are integral to the course. On-site guidance and supervision by a clinical experience supervisor occurs a minimum of five times across the semester. Instructor of record for the student teaching seminar provides regular support for student teachers enrolled in the internship. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee (but can be reimbursed by the Shurmur Center). Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. Offered on a credit/no credit basis. Offered on a credit/no credit basis. *Staff.*

## EDUC 432: Seminar: Secondary Student Teaching

(1 Unit)
Prerequisite: Permission of department.

A capstone course reflecting on practice in the classroom. Focuses on professional development, portfolio design, technology integration and classroom management. Taken concurrently during student teaching semester. *Henke.*

### PSYC 251: Child and Adolescent Development

(1 Unit)
Prerequisite: PSYC 101.
Focuses on physical, cognitive, social and emotional development with emphasis on the periods of infancy, childhood and adolescence. Reviews methods for studying the developing person and major theoretical approaches. *Elischberger, Francis, Keyes, Staff.*

## Plus One and One-half Units Selected From:

### MUS 240: Brass Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all brass instruments including trumpet, French horn, trombone, euphonium and tuba. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Otto.*

### MUS 242: Woodwind Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all woodwind instruments including flute, oboe, clarinet, bassoon and saxophone. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Miller.*

### MUS 244: Stringed Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all bowed string instruments including violin, viola, cello, and string bass. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Abo.*

### MUS 246: Percussion Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all percussion instruments including snare drum, timpani, mallet instruments, as well as most other percussion instruments utilized in an instrumental ensemble. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Wulff.*

## Additional Requirements

- In order to complete the music education program in four years, students wishing to go off-campus should only do so in the fall semester.
- All courses for the major with music education emphasis must be taken for a numerical grade.
- At the end of the first semester of the sophomore year, students' performance level and academic progress toward the major will be evaluated by the faculty.

- Students at the senior level will present a full solo recital, or combination solo recital and small ensemble performance in which he or she is a participant in solo capacity. The Music Department also encourages a recital, either entire or shared, at the junior level.
- Students are required to participate in at least one of the major music performing organizations most appropriate to their primary performance medium, each semester (marching/symphonic band, orchestra, choir, jazz ensemble). Students may enroll in ensembles for either 0 or 0.25 units. Keyboard performers may satisfy this requirement through accompanying; guitarists should make special arrangements with the chair of the Music Department.
- Successful completion of MUS 100, Music Major Seminar (0 unit), 6 out of 8 semesters.

## Successful Completion of the the Following Keyboard Laboratories Will Satisfy the Piano Proficiency Requirement.

### MUS 104: Gateway to Music

(1 unit)
This course will introduce students to the study of basic structural elements of music through analytic listening, notation, composition and in-class performance. Basic elements of music reading will be introduced. Musical examples will be drawn from a variety of styles: Western, classical, jazz/blues, rock/pop/R&B, and world music styles. *Parr, Staff*

### MUS 203: Foundations of Music 1

1 Unit
Prerequisites: MUS 104 with a grade of 2.0 or higher or by departmental permission
Corequisites: MUS 203L based on audition or permission of instructor
A continuation of the study of Western musical language through music fundamentals (key signatures, scales, intervals, rhythmic notation, etc., species counterpoint, melodic structure and embellishment, diatonic chord function and basic four-part harmonization). In addition, chordal part-writing will concern much of this semester's work. Written examinations, compositional exercises, sight-singing and ear training will constitute a significant portion of this course, as well as composition projects. *Staff*

### MUS 204: Foundations of Music 2

1 Unit
Prerequisites: MUS 203 with a Grade of 2.0 or higher
Corequisites: MUS 204L based on audition or permission of instructor
The study of western and non-western musical language beyond music fundamentals. By developing an understanding of tonal and non-tonal musical language through melodic structure, chromatic chord structures, embellishment patterns, tonal progressions, counterpoint, part-writing, composition, sight-singing, and dictation activities, students will be able to hear, sing, improvise, and compose tonal and non-tonal progressions. Furthermore, students will begin to experience chromatic harmonic tendencies, modes and other scale structures, as well as engage with cross-historical references to a diversity of musical genres in their listening, singing, and writing activities. *Staff*

# Music, Performance Emphasis, B.A.

## Requirements for Major with Performance Emphasis (12 1/2 units)

The music major with performance emphasis is for students who intend to study music within a broad spectrum of liberal arts studies. The emphasis in performance may lead to a career in music as a private music teacher, church musician or performer or provide preparation for graduate school. It is assumed that this introductory course sequence will be supplemented by further studies in music. Students should begin their study by enrolling in the following courses in the fall: MUS 100, MUS 104, an applied music lesson (one-half unit), and a departmental ensemble. If enrolling in the ensemble for credit will cause a student to exceed four and one-half units, the ensemble may be audited.

Students selecting this curriculum must complete 12 1/2 units in music and other requirements as follows:

- Four units in applied music (private lessons). Students must enroll for one-half unit each semester. During any semester that an off-campus program is elected, students are expected to arrange to take applied study.
- Vocal performance students are encouraged to elect Diction for Singers during their freshman or sophomore year.
- All courses for the major with performance emphasis must be taken for a numerical grade.
- At the end of the first semester of the sophomore year, students' performance level and academic progress toward the major will be evaluated by the faculty.
- Students at the senior level will present a full solo recital, or combination solo recital and small ensemble performance in which he or she is a participant in solo capacity. The Music Department also encourages a recital, either entire or shared, at the junior level.
- Students are required to participate in at least one of the major music performing organizations most appropriate to their primary performance medium each semester (marching/symphonic band, orchestra, choir, jazz ensemble), taken for either 0 or 0.25 units. Keyboard performers may satisfy this requirement through accompanying; guitarists should make special arrangements with the chair of the Music Department.
- Students must attend seven approved campus recitals and concerts per semester. Specific details concerning approved recitals and concerts and other information is in the Music Department Student Handbook and may be obtained from the Music Department Office.

# Four Units in Music Foundations:

## MUS 104: Gateway to Music

(1 unit)
This course will introduce students to the study of basic structural elements of music through analytic listening, notation, composition and in-class performance. Basic elements of music reading will be introduced. Musical examples will be drawn from a variety of styles: Western, classical, jazz/blues, rock/pop/R&B, and world music styles. *Parr, Staff*

## MUS 203: Foundations of Music 1

1 Unit
Prerequisites: MUS 104 with a grade of 2.0 or higher or by departmental permission
Corequisites: MUS 203L based on audition or permission of instructor
A continuation of the study of Western musical language through music fundamentals (key signatures, scales, intervals, rhythmic notation, etc., species counterpoint, melodic structure and embellishment, diatonic chord function and basic four-part harmonization). In addition, chordal part-writing will concern much of this semester's work. Written examinations, compositional exercises, sight-singing and ear training will constitute a significant portion of this course, as well as composition projects. *Staff*

## MUS 204: Foundations of Music 2

1 Unit
Prerequisites:  MUS 203 with a Grade of 2.0 or higher
Corequisites: MUS 204L based on audition or permission of instructor
The study of western and non-western musical language beyond music fundamentals.  By developing an understanding of tonal and non-tonal musical language through melodic structure, chromatic chord structures, embellishment patterns, tonal progressions, counterpoint, part-writing, composition, sight-singing, and dictation activities, students will be able to hear, sing, improvise, and compose tonal and non-tonal progressions. Furthermore, students will begin to experience chromatic harmonic tendencies, modes and other scale structures, as well as engage with cross-historical references to a diversity of musical genres in their listening, singing, and writing activities. *Staff*

### MUS 303: Foundations of Music 3

1 Unit
Prerequisites:  MUS 204 with a grade of 2.0 or higher
The study of western and non-western musical historical periods, genres, and styles. By developing an understanding of tonal and non-tonal musical language through listening, critical score analysis, as well as performance and scholarly research activities, students will be able to hear and critically discuss distinct musical styles and catalogue/describe them into appropriate generic, chronological, and structural categories. Students will also engage with cross-historical references to a diversity of musical genres in their listening, performing, and writing/research activities. *Staff*

## Music Seminar:

### MUS 401: Seminar

(1/2 Unit)
*Staff.*

## Four Units in Music Electives as follows (at least two units must be from List A)

## List A - Building on Core Studies

### MUS 111: Music Appreciation

(1 Unit)
Designed for the non-music major who wishes to gain an appreciation of music as a fine art. The musical elements of style, form and design are investigated primarily through listening. Not open to music majors. *Staff.*

### MUS 113: Introduction to Opera

(1 Unit)
An introductory course designed for both the music major and non-major. Concentrates on the most frequently performed operas of Mozart, Puccini, Verdi and Wagner. Extensive use of video tapes of opera performances with sub-titles. Offered in alternate years. *Balke.*

### MUS 120: Music Performance as a Creative Process

(1 Unit)
Corequisites: MUS 121, MUS 122, MUS 124, MUS 125, MUS 131 or MUS 132.

Designed to give students the tools necessary to think, discuss and write critically about music both within and outside of their respective ensemble "labs." Through reading, writing and listening assignments, students will become more aware of the elements involved in musical interpretation. *McIlhagga.*

## MUS 202: Theory II

(1 Unit)
Prerequisite: MUS 201 or permission of instructor.
A continuation of the studies begun in MUS 101, MUS 102 and MUS 201 with a special emphasis on form. An introduction to the materials and techniques of twentieth and twenty-first-century music. Sight-singing and ear-training continue. A major analysis paper is required. *Jensen-Abbott.*

## MUS 216: Piano Literature

(1/2 Unit)
An historical, melodic, and harmonic overview of some of the major piano works by the most significant composers of the seventeenth through twenty-first centuries. Designed to enhance a music major's understanding of works considered to be the standards in piano and chamber music. Offered in alternate years. *Jensen-Abbott.*

## MUS 217: Instrumental Literature

(1/2 Unit)
An historical, melodic, and harmonic overview of some of the major instrumental musical works by the most significant composers of the seventeenth through twenty-first centuries. Designed to enhance a music major's understanding of works considered to be the standards in orchestral, band and chamber music. Offered in alternate years. *McIlhagga.*

## MUS 218: Choral Literature

(1/2 Unit)
An historical, melodic, and harmonic overview of some of the major choral works by the most significant composers of the seventeenth through twenty-first centuries. Designed to enhance a music major's understanding of works considered to be the standards in choral music. Offered in alternate years. *Parr.*

## MUS 230: Introduction to Conducting

(1/2 Unit)
Prerequisite: MUS 204 or permission of instructor.
Fundamentals of conducting vocal and instrumental ensembles. (1) basic beat patterns; (2) score analysis; (3) instrument and voice ranges and transpositions; and (4) some practical aspects of rehearsing. Lecture and laboratory. *Staff*

## MUS 314: Music History II

(1 Unit)
Prerequisite: MUS 201 or permission of instructor.
A continuation of MUS 313 covering music from the eighteenth century to the present. In addition to examinations and analysis assignments, students complete a major research paper by the end of the semester that investigates some aspect of contemporary Western music or deal with non-Western music. *Abbott.*

### MUS 319: Evolution of Jazz

(1 Unit)
An exploration of the rich cultural background and evolution of jazz music through discussion of important performers, composers, educators and critics with respect to their contribution to the development of the art form. Emphasis is placed on developing critical listening skills through the extensive use of landmark recordings and live performances. Offered in alternate years. *Ball.*

### MUS 330: Choral Conducting

(1/2 Unit)
Prerequisite: MUS 230.
Laboratory work in choral conducting and score reading with practical experience in techniques of training choral ensembles. Required of all choral music education majors. Offered in alternate years. *Parr.*

### MUS 331: Instrumental Conducting

(1/2 Unit)
Prerequisite: MUS 230.
Laboratory work to develop techniques and skills required for instrumental conducting and score reading. Students may be given the opportunity to conduct instrumental ensembles on campus. Required of all instrumental music education majors. Offered in alternate years. *Ball.*

## List B - Vocational/Pedagogical/Performance Practice/Interdisciplinary

### MUS 110: Rock-and-Roll in Society

(1 Unit)
Study of the origins, characteristics and stylistic development of rock-and-roll music from the early 1950s to the present through the frameworks of race, gender/ethnicity, politics, and popular culture. Designed for the non-music major. Course fee. *McIlhagga.*

### MUS 137: Piano Chamber Music Ensemble

(1/4 Unit)
Prerequisites: Music major and permission of instructor.
Develops ensemble skills for pianists playing in duos with a second pianist or in mixed ensembles such as trios for piano and strings, etc. Topics include balance, rhythmic precision and pedaling, as well as overall phrasing and interpretation. *Abbott, Jensen-Abbott.*

### MUS 133: Opera Workshop

(1/2 Unit)
Provides opportunity for involvement in the production of operas or opera scenes from auditions through performance. Covers all aspects of opera from vocal roles to technical support. Offered in alternate years. *Staff.*

### MUS 205: Jazz Improvisation

(1 Unit)
Prerequisite: MUS 101 recommended.

An introduction to the art and craft of jazz improvisation through a study of the theoretical, historical, philosophical and aesthetic factors surrounding its past, present and future performance practice. Course material is designed to develop thinking and reacting skills needed for performance through assignments in repertoire, scales, keyboard harmony skills and melodic patterns. Offered in alternate years. *Ball.*

## MUS 220: Diction for Singers

(1/2 Unit)
A concentrated course on the basics of the International Phonetic Alphabet (IPA) including application of this system to the correct stage pronunciation and artistic performance of standard classical solo repertoire (art song, opera) in English, Italian, German and French. *Balke.*

## MUS 221: Diction for Singers

(1 Unit)
A concentrated course on the basics of the International Phonetic Alphabet (IPA) including application of this system to the correct stage pronunciation and artistic performance of standard classical solo repertoire (art song, opera) in English, Italian, German and French. *Balke.*

## MUS 240: Brass Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all brass instruments including trumpet, French horn, trombone, euphonium and tuba. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Otto.*

## MUS 242: Woodwind Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all woodwind instruments including flute, oboe, clarinet, bassoon and saxophone. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Miller.*

## MUS 244: Stringed Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all bowed string instruments including violin, viola, cello, and string bass. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Abo.*

## MUS 246: Percussion Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all percussion instruments including snare drum, timpani, mallet instruments, as well as most other percussion instruments utilized in an instrumental ensemble. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Wulff.*

## MUS 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### MUS 322: Teaching of Instrumental Music in the Schools

(1 Unit)
Prerequisite: MUS 230.
Required of all instrumental music education majors. Designed to acquaint the student with all aspects of teaching, developing, planning, directing and administering public school instrumental music programs, K-12. Offered in alternate years. *McIlhagga.*

### MUS 325: Teaching of Music in the Elementary School

(1 Unit)
Prerequisite: MUS 230.
Designed to give the student a knowledge of a well-rounded music program for the elementary grades. Creative experiences, demonstrations and practical work in performing and listening are stressed. Lecture and laboratory. Offered in alternate years. *Root.*

### MUS 328: Teaching of Choral Music in the Secondary School

(1 Unit)
Prerequisite: MUS 230; MUS 330 is strongly recommended.
An introduction to all aspects of the music program for the secondary school and the techniques for administering the program. Lecture and laboratory. It is strongly recommended that Music 330 (Choral Conducting) be elected prior to 328. Offered in alternate years. *Parr.*

### MUS 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## Successful Completion of the Following Keyboard Laboratories Will Satisfy the Piano Proficiency Requirement:

### MUS 104: Gateway to Music

(1 unit)
This course will introduce students to the study of basic structural elements of music through analytic listening, notation, composition and in-class performance. Basic elements of music reading will be introduced. Musical examples will be drawn from a variety of styles: Western, classical, jazz/blues, rock/pop/R&B, and world music styles. *Parr, Staff*

### MUS 203: Foundations of Music 1

1 Unit
Prerequisites: MUS 104 with a grade of 2.0 or higher or by departmental permission
Corequisites: MUS 203L based on audition or permission of instructor
A continuation of the study of Western musical language through music fundamentals (key signatures, scales, intervals,

rhythmic notation, etc., species counterpoint, melodic structure and embellishment, diatonic chord function and basic four-part harmonization). In addition, chordal part-writing will concern much of this semester's work. Written examinations, compositional exercises, sight-singing and ear training will constitute a significant portion of this course, as well as composition projects. *Staff*

### MUS 204: Foundations of Music 2

1 Unit
Prerequisites: MUS 203 with a Grade of 2.0 or higher
Corequisites: MUS 204L based on audition or permission of instructor
The study of western and non-western musical language beyond music fundamentals. By developing an understanding of tonal and non-tonal musical language through melodic structure, chromatic chord structures, embellishment patterns, tonal progressions, counterpoint, part-writing, composition, sight-singing, and dictation activities, students will be able to hear, sing, improvise, and compose tonal and non-tonal progressions. Furthermore, students will begin to experience chromatic harmonic tendencies, modes and other scale structures, as well as engage with cross-historical references to a diversity of musical genres in their listening, singing, and writing activities. *Staff*

# Neuroscience

# Faculty

**Roger Albertson,** Biology, Ph.D. University of Oregon.

**Tammy J. Jechura**, Psychological Science, Ph.D., University of Michigan.

**Barbara J. Keyes**, Psychological Science, Ph.D., Bowling Green State University.

**Bindu Madhok**, Philosphy, Ph.D., Brown University.

**Dan Mittag**, Philosphy, Ph.D., University of Rochester.

**Ken Saville,** Biology, Ph.D., Syracuse University.

**Ryan A. Selleck**, Psychological Science, Ph.D., University of Wisconsid, Madison.

**Mareike Wieth,** Psychological Science, Ph.D. Michigan State University.

Introduction

The neuroscience concentration, which is selected in addition to an academic major, was designed for students who are interested in the neural underpinnings of behavior and cognition. The concentration begins with core courses providing a multi-disciplinary, multi-divisional introduction to the study of the mind/brain that spans all levels of current neuroscientific research. Advanced course work allows students to pursue lines of inquiry they find especially attractive in the core courses, and in a major research project or internship they pursue a theoretical or practical test of their developing skills. This approach to neuroscience provides Albion students with the knowledge, insight and research skills necessary for success in graduate study or careers in the life sciences.

**Admission—**The neuroscience concentration is open to all students, regardless of academic major. However, because many of the courses have prerequisites, students who elect the neuroscience concentration are typically majors in biology, chemistry or psychology. Students must apply for admission to the concentration and are advised to do so during their sophomore year. For more information and an application form, contact one of the faculty members who direct the concentration.

# Student Learning Outcomes

After completing the Neuroscience concentration, students will be able to have a basic understanding of

~ the function of individual neurons and of communication between neurons.

~ the ways in which the nervous system underlies behavior and mental activity.
~ the many levels at which the nervous system can be studied, including molecular, cellular, systems, behavioral and cognitive neuroscience levels.

~ the logic and methodology of experiments examining the role of the nervous system in behavior.

~ the link between neural abnormalities and psychopathlogy.

# Neuroscience Concentration

## Requirements for Neuroscience Concentration

The following are required for the neuroscience concentration:

## Core:

### NEUR 241: Fundamentals of Behavioral Neuroscience

(1 Unit)
Prerequisite: PSYC 101 or permission of instructor.
An introduction to brain structure and function. Emphasis on the way the nervous system is organized to process information, construct representation of the world and generate adaptive behavior. Lecture, discussion, dissection. Same as PSYC 241. *Jechura, Keyes, Wilson.*

### NEUR 242: Fundamentals of Cellular and Molecular Neuroscience

(1 Unit)
Prerequisites: NEUR 241 and BIOL 195, or permission of instructor.
An introduction to neuroscience with emphasis at the cellular and molecular levels. Covers structure and function of neurons and glial cells, electrical and chemical synapses, neurotransmitters, aspects of vision, axon guidance and outgrowth, energy metabolism in the brain, and the hormones and brain regions that affect eating activity and behavior. *Albertson.*

- A major research project or internship.

## The Approved Courses Include:

Four units, drawn from an approved list of courses, selected from at least two different departments.

## Biology

### BIOL 300: Genetics

(1 Unit)
Prerequisite: BIOL 195 , BIOL 210.
Mechanisms of inheritance and of gene structure and function in living organisms. Both classical and molecular genetics are considered as they relate to function. *Staff.*

## BIOL 301: Cell Biology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
An in-depth investigation of biological systems at the cellular, subcellular and molecular levels. Studies of a variety of cell types and energy relations within cells. Lecture emphasizes metabolism, metabolic regulation and cellular diversity. Laboratory emphasizes measurement and analysis of subcellular features. *Cervantes.*

## BIOL 314: Comparative Anatomy

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
Comparative anatomical study of vertebrate organ systems, their development and evolution. Lecture and laboratory. *Hallinger.*

## BIOL 324: Developmental Biology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
The genetic, molecular and cellular mechanisms underlying early development of multicellular organisms. Potential topics include fertilization and early development, gene regulation during development, neural pathfinding, cell signaling, cell division and growth, organogenesis, limb development, metamorphosis, regeneration, sex determination, the evolution of development, genomics, and stem cell research. Lecture and laboratory. *Albertson.*

## BIOL 341: Physiology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor; CHEM 154 recommended.
A study of the function of living organisms. Each physiological system is examined at the molecular, cellular, and tissue level. Particular focus is given to how each system is regulated and the interplay between systems. Lecture and laboratory. *Rabquer.*

## BIOL 362: Molecular Biology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor; CHEM 154 recommended.
The theory and practice of modern molecular genetics will be explored. Techniques potentially considered include: DNA cloning, DNA hybridization, the polymerase chain reaction, DNA sequencing, and the expression of cloned genes in bacteria. Lecture/discussion and laboratory. Offered in alternate years. *Saville.*

- BIOL 366: Endocrinology

## BIOL 368: Behavioral Ecology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.

Patterns and functions of behavior examined from an ecological-evolutionary perspective. Topics include history of animal behavior, behavioral genetics, habitat selection, foraging, antipredator behavior, cooperation and altruism, communication, sexual selection, mating systems, parental behavior and optimality models. Independent field studies of living animals. Lecture and laboratory. Offered in alternate years. *Staff.*

## Philosophy

### PHIL 306: Neuroscience and Ethics

(1 Unit)
An introduction to the dialogue that has developed between cognitive neuroscientists and moral philosophers. Cognitive neuroscience brings to the study of ethics an interest in the way the brain processes information and in the kinds of brain states that subserve thought and action—in short, it is answering the question of what kind of information-processing creatures we are. *Madhok.*

### PHIL 315: Knowledge, Truth and Reason

(1 Unit)
Prerequisite: One prior course in philosophy.
A critical examination of recent work in the theory of knowledge, i.e., of classic contemporary papers on skepticism, knowledge and the justification of belief. *Mittag.*

### PHIL 318: Philosophy of Mind

(1 Unit)
An introduction to the philosophy of mind. Explores the relation of the mind to the physical world and evaluates prominent competing theories about the nature of the mind, including the identity theory, dualism, behaviorism, functionalism and eliminative materialism. Also covers artificial intelligence, phenomenal consciousness, the adequacy of folk psychological explanation and theories of mental content. *Mittag.*

## Psychological Science

### PSYC 243: Sensation & Perception

(1 Unit)
Prerequisite: PSYC 101.
Operation of sensory systems and major principles of perception. Addresses the classical question, "Why do things look as they do?" Not offered every year. *Wieth.*

- PSYC 343: Psychology of Perception

### PSYC 245: Psychology of Learning

(1 Unit)
Prerequisite: PSYC 101.
A survey of major concepts and issues in conditioning, learning and memory processes. Emphasizes research dealing with the ways learning and memory interact with other variables such as development and species-typical behavior. Lecture and laboratory. Not offered every year. *Wilson.*

- PSYC 345: Psychology of Learning

### PSYC 348: Research in Behavioral Neuroscience

(1 Unit)
Prerequisites: PSYC 306 with a grade of 2.0 or higher and PSYC 241/NEUR 241, or permission of instructor.
Examines the methodology of behavioral neuroscience research. Focuses on a review of the major means by which brain/behavior relations can be determined (i.e., lesion, stimulation, and recording studies) as well as an examination of much that has been learned using these procedures. Laboratory work covers at least two of these procedures in detail: human electrophysiology and a lesion, stimulation, or drug experiment in animals. *Jechura, Wilson.*

### PSYC 378: Research in Cognitive Psychology

(1 Unit)
Prerequisites: PSYC 306 with a grade of 2.0 or higher or permission of instructor.
A review of recent studies of attention, memory, concept formation, problem solving and related areas. Focuses on the ability of humans to select, code, store, organize and retrieve information. Lecture and laboratory. *Wieth.*

- PSYC 278: Research in Cognitive Psychology

## Note

For more information, contact one of the faculty members who direct the concentration.

# Philosophy

# Faculty

**Daniel M. Mittag**, chair and associate professor.
B.A., Drake University; M.A., Texas A&M University; M.A., Ph.D., University of Rochester.

**Jeremy S. Kirby**, professor.
B.A., M.A., University of Utah; M.A., Ph.D., Florida State University.

**Bindu Madhok**, professor.
B.A., University of Calcutta; Ph.D., Brown University.

# Introduction

Historically, philosophy is at the center of the liberal arts tradition. The very concept of an Academy that combines the freedom to inquire with the responsibility to clarify and solve social problems is the invention of classical Greek philosophers.

By subject matter, philosophy is one of the humanities, and studies the concepts we have developed in order to understand the world in which we find ourselves and express what we have discovered. It critically examines our basic assumptions about the world and human relationships.

But philosophy retains a methodological kinship with the sciences, whose methods developed out of general philosophical inquiry. Critical thinking is the hallmark of philosophy courses that bring clarity, precision, and logically rigorous argument to controversial questions about what is real, knowable and valuable. The development of this *critical* perspective, an appreciation of inquiry and the values that underlie it, is the heart of philosophy.

Philosophy Department Website

# Career Opportunities

Analysis of arguments, clear and precise expression of one's views—particularly in writing—and the ability to comprehend complex systems of thought are skills cultivated by philosophy courses that are useful in *all* areas of life. But our students find their philosophy background particularly useful in the professions. Pre-law students take PHIL 107: Logic and Critical Reasoning to prepare for the LSAT and sharpen their analytical skills for law school, while PHIL 335: Philosophical Issues in the Law is a critical examination of important legal concepts and institutions. Students preparing for medical school, dental school or the allied health professions discover that PHIL 308: Biomedical Ethics examines moral problems raised by advancements in medical research and technology that they will soon face. PHIL 201: Ethics, PHIL 202: Social Philosophy, PHIL 206: Contemporary Moral Problems, PHIL 302: Leadership Ethics, PHIL 304: Ethics and Public Policy and PHIL 309: International Ethics and Global Development are useful for students interested in public policy. PHIL 303: Business Ethics examines moral problems posed by corporate conduct, e.g., profit-maximization vs. social responsibility, deception vs. honesty in advertising, preferential hiring vs. reverse discrimination. Students pursuing careers in the environmental sciences find PHIL 301: Environmental Ethics to be particularly useful in acquiring an understanding of underlying value-frameworks in environmental theories and practices. PHIL 220: Philosophy and History of Science, PHIL 306: Neuroscience and Ethics and PHIL 318: Philosophy of Mind are of great value to students pursuing careers in neuroscience.

The critical skills and sense of intellectual heritage that follow the study of philosophy are not only useful in finding a job, but they foster maturity of judgment, personal growth and lifelong learning.

# Special Features

Because philosophy studies the systems of ideas we have developed to understand the world and our place in it, philosophy courses often explore the conceptual foundations of other disciplines; e.g., PHIL 220: Philosophy and History of Science explores the basic concepts and underlying logic of scientific method, Philosophy of Art (215) is an analysis of theories of the arts and art criticism and often includes field trips to major galleries, and PHIL 318: Philosophy of Mind examines theories that attempt to explain consciousness. These natural affinities make double majors attractive, and they are encouraged by the department.

Philosophy students can get to know one another outside of class as members of the Philosophy Club or as members of the national philosophy honorary, Phi Sigma Tau. Members of the honorary have brought distinguished philosophers to campus for lectures and discussion including Paul Churchland, Fred Dretske, David Lewis and Martha Nussbaum.

Philosophy majors are encouraged to write a senior thesis and submit it for departmental honors. Successful completion of this research project results in graduation with departmental honors in philosophy. The Padgett Prize in Philosophy, established in honor of Professor Emeritus Jack F. Padgett, is given annually to the outstanding senior philosophy major.

The Ned S. Garvin Scholarship in Philosophy, established in memory of Professor Ned Garvin, is given annually to the outstanding rising junior philosophy major.

# Preparation for Graduate Study

- We recommend that students plan their schedules in consultation with a Philosophy Department faculty member.
- We recommend that students take more than eight philosophy courses.

- The following courses are *strongly recommended* for graduate study: PHIL 201, PHIL 207, PHIL 211, PHIL 212, PHIL 214, PHIL 310, PHIL 315.
- We recommend that students submit a thesis for departmental honors.
- We recommend that students discuss the graduate school application process with the department during the spring of their junior year.

# Student Learning Outcomes

Philosophy Majors will be able to:

- *explain* and *analyze* philosophical texts and discourse. [Interpretation Outcome]
- *discuss* major figures, ideas, and systems of thought of philosophy. [Systems and Ideas Outcome]
- *identify* arguments and *evaluate* them with respect to validity and soundness. [Logical Analysis Outcome]
- *express* their views with clarity, precision, and rigor. [Clarity and Rigor Outcome]
- *apply* multiple philosophical theories or frameworks to an issue and *critically assess* each of these applications. [Application and Critical Assessment Outcome]

Philosophy Minors will be able to:

- *explain* philosophical texts and discourse. [Interpretation Outcome]
- *discuss* major figures, ideas, and systems of thought of philosophy. [Systems and Ideas Outcome]
- *identify* arguments and *evaluate* them with respect to validity and soundness. [Logical Analysis Outcome]
- *express* their views with clarity, precision, and rigor. [Clarity and Rigor Outcome]
- *compare and contrast* multiple philosophical theories or frameworks on an issue. [Application Outcome]

Value Theory Minors will be able to:

- *explain* philosophical texts and discourse. [Interpretation Outcome]
- *discuss* major figures, ideas, and systems of thought of philosophy. [Systems and Ideas Outcome]
- *identify* arguments and *evaluate* them with respect to validity and soundness. [Logical Analysis Outcome]
- *express* their views with clarity, precision, and rigor. [Clarity and Rigor Outcome]
- *compare and contrast* multiple ethical theories or frameworks with respect to an issue. [Application Outcome]

# Philosophy Minor

## Requirements for Minor

- Five units in philosophy, at least two of which must be at the 300- or 400-level.

# Philosophy, B.A.

## Requirements for Major

- A minimum of eight units in philosophy.
- At least three of these eight units must be at the 300- or 400-level.
- All courses for the major must be taken for a numerical grade and cannot be taken credit/no credit. Directed studies may be counted only by permission of the department.

# Value Theory Minor

## Requirements for Minor in Value Theory

### Five Units, at Least Two of Which Must Be at the 300-level or Higher, Selected from the Following:

## PHIL 201: Ethics

(1 Unit)
An examination and evaluation of the major ethical theories, both classical and contemporary, and the application of these theories to a current moral problem. *Madhok.*

## PHIL 202: Social Philosophy

(1 Unit)
An issues and historically oriented introduction to a broad range of philosophical subject matter and methodologies through a clarification and analysis of argumentation used to justify selected social and political institutions and practices—e.g., individual liberties, properties of personhood, the nature of the state, obligations and rights, etc. *Staff.*

## PHIL 206: Contemporary Moral Problems

(1 Unit)
An introduction to a broad range of philosophical subjects and methodologies through an examination and analysis of contemporary moral problems—e.g., abortion, euthanasia, genetic engineering, sexual morality, gender and racial discrimination, corporate crime, pornography and censorship, the death penalty, ecology, world hunger, etc. *Madhok.*

## PHIL 301: Environmental Ethics

(1 Unit)
Examines theoretical and practical perspectives on ethical issues in relation to the environment. The theoretical issues range from whether we should assign moral value to species other than the human (and if so, on the basis of what criteria) to whether we have moral obligations to preserve the environment for future generations (and if so, what this would imply for the present generations). The practical issues range from creating incentives for restricting population growth without abdicating responsibilities toward the world's hungry, to the issue of what short-and long-term policies and practices need to be adopted to deal effectively with reducing pollution and hazardous waste while working toward a recycling, sustainable global society. *Madhok.*

## PHIL 302: Leadership Ethics

(1 Unit)
Examines the ethical foundations of leadership. Involves an in-depth discussion of foremost leadership theories and their applications to different contexts; critically examines the morally distinct aspects of leadership by looking at the relationships among power, self-interest, and morality; and analyzes leadership from within the ethical frameworks of virtue, duty, and utility along with discussing the ethical challenges of diversity (culture relativism, race, and gender) to traditional leadership ethics. *Madhok.*

## PHIL 303: Business Ethics

(1 Unit)
An examination of selected moral problems posed by corporate conduct—e.g., profit-maximization vs. social responsibility, corporate crime and the criminal justice system, business vs. environmental concerns, preferential hiring vs. reverse discrimination, employee autonomy vs. corporate loyalty, deception vs. honesty in advertising, corporate vs. government regulation. Clarification and critical examination of different ethical perspectives for resolving these moral dilemmas. *Madhok.*

## PHIL 304: Ethics and Public Policy

(1 Unit)
Emphasizes the ethical foundations of public policy. Rights, obligations, justice, autonomy, the nature of the good life: should these play a role in determining public policy, and if so, how? Focuses on the interaction between ethical values and public policy in areas such as health care, law, government, foreign policy, citizenship, education and media. *Madhok.*

### PHIL 306: Neuroscience and Ethics

(1 Unit)
An introduction to the dialogue that has developed between cognitive neuroscientists and moral philosophers. Cognitive neuroscience brings to the study of ethics an interest in the way the brain processes information and in the kinds of brain states that subserve thought and action—in short, it is answering the question of what kind of information-processing creatures we are. *Madhok.*

### PHIL 308: Biomedical Ethics

(1 Unit)
The application of major ethical theories to some of the moral problems raised by recent developments in medical technology. Does increased medical knowledge (the end) justify experimentation with human subjects (the means)? How much should a patient be told and who decides? Do parents have the right to give birth to a defective infant and thereby apparently pollute the gene pool? To whom is the genetic counselor responsible—fetus, parent, future generations? Is there a right to die? Who should be the ultimate decision-maker—physician, patient, pastor? Is health care a right or a privilege? In answering these dilemmas, are there any moral rules to follow or does each person decide what is best in the situation? *Madhok.*

### PHIL 309: International Ethics and Global Development

(1 Unit)
Explores the ethics of development in an international context. What should development be? Who should play a role in bringing about development? Examines multiple answers to these questions via an understanding of global development ethical theories and approaches such as the basic human needs approach, the human rights approach, the theory of development as freedom, the capabilities approach, theories of justice, as well as utilitarianism and deontological approaches. Applies these development ethics frameworks to important international issues such as poverty, gender inequality, violence and insecurity, over-consumption and globalization. *Madhok.*

### PHIL 335: Philosophical Issues in the Law

(1 Unit)
Designed both for students interested in philosophy and for those interested in political science, history, economics, or sociology. Provides an explanation of legal concepts and institutions from the philosophical perspective. Develops in the student: (1) an understanding of some of the major philosophical issues in the law and (2) the ability to reflect critically upon them. *Madhok.*

Additionally, selected topics courses (PHIL 189, 289, 389) may count towards fulfilling the requirements of the Value Theory minor with permission of the department chair.

# Physics

# Engineering, Dual Degree Program

# Faculty

**Charles E. Moreau**, associate professor.
B.S., 1994, Alma College; M.S., 1996, Ph.D., 2001, Michigan State University. Appointed 2002.

# Introduction

The dual-degree program in engineering (DDPE) gives the student the best of two worlds—liberal arts and engineering. Today's engineers must be well-grounded in basic science and mathematics, have a broad range of knowledge as well as the skills to acquire new information, and think critically and communicate effectively. Engineering is a dynamic profession that is constantly striving to stay on the frontier of technological development. To adapt to this need for change, engineers must be able to educate themselves and learn new techniques to stay abreast of their field. They must also demonstrate exemplary professionalism and the ability to work in interdisciplinary and collaborative environments, be alert to the implications of their work, and be concerned about the effects of science and technology upon the larger world. Mindful of these goals, the dual-degree program in engineering at Albion College prepares students well for success in this dynamic and challenging profession.

Under the dual-degree program, a student spends three or more years at Albion and receives a strong background in the basic sciences and mathematics that underlie all engineering while gaining this knowledge in the context of the liberal arts tradition. Upon admission and transfer to an approved engineering school (listed below), the student then completes his/her engineering education. This engineering course work typically takes an additional two to two and one-half years, depending upon the number of advanced courses the student has taken at Albion and on the engineering discipline. After successful completion of eight units at the engineering school that have been approved for transfer back to Albion by the Engineering Advisory Committee (EAC), the student is then eligible to receive a B.A. degree from Albion. The student also receives a B.S. degree in engineering from the transfer institution upon successful completion of the relevant program's graduation requirements.

**Students must be admitted to the dual-degree program in engineering.** Go to the dual-degree program in engineering website for application information. Additional program information is available from the director .

# Requirements for Dual-Degree Program in Engineering

Students in the dual-degree program in engineering have a strong background in mathematics and science, very good academic performance, and a desire to pursue the engineering profession. To be eligible for program admission, students must declare the dual-degree engineering major in either mathematics or physics, write a personal essay, complete a personal interview with the program director, and have at least a 2.5 overall GPA, as well as at least a 2.5 GPA in completed courses in the science division. Although these program admission requirements should normally be completed by the end of a student's first year at Albion, late admission requests are considered by the Engineering Advisory Committee as needed.

Please, see the section of the catalog for the dual-degree program in engineering for detailed requirements.

# Career Opportunities

The dual-degree program in engineering provides students foundational skills in science, mathematics and computer science, as well as substantial experience in applying these skills to solving contemporary problems. Application examples include the design and realization of water purification systems, automotive/aerospace/marine vehicles, computer circuits/hardware, supply chain networks, and power grids, to name only a few. As such, DDPE graduates have substantial professional opportunities in both the public and private sectors, ranging from design engineer to

project manager to entrepreneur. Graduates are also well equipped to pursue graduate degrees in engineering, dentistry, medicine or law.

# Degree Programs

After successfully completing three years of approved study at Albion College, DDPE students are required to gain admission to an engineering degree program accredited by the Accreditation Board for Engineering and Technology (ABET). As the admission requirements of these programs vary substantially, students are required to have their school of transfer approved by the EAC. **Students who transfer to engineering schools that have not been approved by the EAC will not receive an Albion degree.**

The two engineering programs currently affiliated with Albion College are:

1. University of Michigan (MI) College of Engineering
2. Columbia University (NY) Fu Foundation School of Engineering and Applied Science

Albion has a formal transfer agreement with Columbia University that guarantees admission to Albion College students who successfully complete all required courses in the first attempt with a grade of 3.0, maintain a 3.3 GPA in all required courses and in overall course work, and satisfy other academic requirements as specified by Columbia. The University of Michigan requires all students to earn a minimum GPA of 3.0 both overall and in science prior to transfer, with higher GPA requirements for more competitive engineering majors such as mechanical, chemical or electrical engineering. Although meeting these minimum GPA requirements is generally sufficient for admission to the University of Michigan, it is not a guarantee. Students are strongly recommended to earn GPAs above these minimum admission requirements.

Students unable to meet the GPA requirements of the above two schools, or who would prefer to transfer to an engineering school not listed above, may still participate in the DDPE through transfer to an alternate engineering institution. They will still need to meet all or parts of the dual-degree program requirements, as listed below. See the DDPE director for additional information about this option.

# Physics

# Faculty

**Nicolle E. B. Zellner,** chair and professor.
B.S., University of Wisconsin; M.S., Ph.D., Rensselaer Polytechnic Institute. Appointed 2005.

**Charles E. Moreau**, associate professor.
B.S., Alma College; M.S., Ph.D., Michigan State University. Appointed 2002.

**Demian Cho**, assistant professor
B.S., University of Texas – Austin; M.S., University of Texas – Dallas; Ph.D., University of Wisconsin – Milwaukee. Appointed 2021.

**Moataz Khalifa**, assitant professor
B.S., The American University in Cairo; M.S., Ph.D., Virginia Tech. Appointed 2022.

# Introduction

Physics involves the determination of the basic laws which allow one to predict natural behavior; indeed, physics originates from the Greek word for nature. These basic laws form the foundation for all the natural sciences. The

department offers a program for physics majors, physics majors who seek an emphasis in astronomy, physics minors, pre-engineering students, students who require a physics cognate, and non-science students. The faculty have backgrounds in atomic, solid state, low-temperature, and quantum physics, electronics, and in astronomy and planetary science. Students have the opportunity to participate in faculty research projects in mesoscopic patterned magnetic thin films, quantum computing, low-temperature physics, photonics, origins of the solar system, extraterrestrial sample analysis, and low-energy ion-atom scattering. Facilities include a cryogenic photon counting lab, a thin film deposition chamber, a 5 kV ion-atom accelerator, a low-level nuclear gamma ray counting system, a 14-inch Celestron telescope with a CCD camera, and a historically significant Alvan Clark telescope.

The department sponsors the dual-degree program in engineering.

Physics Department Website

# Career Opportunities

Majors in physics are prepared to do graduate work in physics and related areas, which can lead to careers in teaching and research or research in industrial or government laboratories. Physics majors are also well equipped to pursue additional studies in engineering and typically are strong candidates for medical school, dental school, and law school. Employment opportunities are also available in industry, government and secondary school teaching.

# Special Features

Opportunities are available for off-campus study during the school year, particularly participation in the Great Lakes Colleges Association's Oak Ridge Science Semester conducted at Oak Ridge National Laboratory in Tennessee. The curriculum in physics can be adjusted to accommodate participation in other off-campus study programs as well. An active Society of Physics Students chapter sponsors seminars, field trips, tutoring and social events from a clubroom, and the Astronomy Club members have regular access to the campus telescopes. A prize established by Nobel Laureate E.T.S. Walton is given annually to the outstanding senior physics major, and the Physics Faculty and Alumni Scholarship has been given to an entering student.

# Student Learning Outcomes

## Physics

**Students will be able to:**

1. articulate concepts in core areas of physics, such as mechanics, electricity and magnetism, and modern physics;
2. solve physics problems using qualitative and quantitative reasoning and appropriate mathematical techniques;
3. conduct experiments that address questions in physics;
4. interpret qualitative and quantitative experimental data to answer physics questions; and
5. communicate effectively in both oral and written scientific context.

## Physics, Astronomy Emphasis

**Students will be able to:**

1. articulate concepts in core areas of astronomy, such as formation and evolution of planets, stars, and galaxies; and origin and fate of the universe;
2. solve astronomy-focused physics problems using qualitative and quantitative reasoning and appropriate mathematical techniques;
3. identify celestial objects and patterns in the night sky;
4. analyze and interpret observational data in terms of astronomical models; and
5. communicate effectively in both oral and written scientific context.

## Engineering, Dual Degree Program

**Students will be able to**

1. articulate concepts in core areas of physics, such as mechanics, electricity and magnetism, and modern physics;
2. solve physics problems using qualitative and quantitative reasoning and appropriate mathematical techniques;
3. conduct experiments that address questions in physics, especially those concerning electronics;
4. interpret qualitative and quantitative experimental data to answer questions; and
5. communicate effectively in both oral and written scientific context.

## Physics Minor

**Students will be able to**

1. articulate concepts in core areas of physics, such as mechanics, electricity and magnetism, and modern physics;
2. solve physics problems using qualitative and quantitative reasoning and sophisticated mathematical techniques; and
3. communicate effectively in both oral and written scientific context.

## Physics, with Secondary Education Certification

**Students will be able to**

1. articulate fundamental concepts in core areas of physics, such as mechanics, electricity and magnetism, and modern physics;
2. conduct experiments that address questions in physics;
3. interpret qualitative and quantitative data to answer physics questions;

4. communicate effectively in both oral and written scientific context, especially to high school student population; and

5. complete requirements for eligibility for certification.

### Physics, with Secondary Education Certification, Minor

**Students will be able to**

1. articulate fundamental concepts in core areas of physics, such as mechanics, electricity and magnetism, and modern physics;

2. interpret qualitative and quantitative data to answer physics questions;

3. communicate effectively in both oral and written scientific context, especially to an elementary student population; and

4. complete requirements for eligibility for certification.

# Departmental Policy on Advanced Placement Credit

Students desiring course credit for AP Physics should contact the department or the Registrar's Office for information.

# Majors and Minors

The physics major and the physics major with astronomy emphasis are designed for students who plan to pursue graduate studies in physics, astrophysics, astronomy, or a related area; students who enter the workforce; or students who wish to have physics as a second major.

## Engineering, Dual Degree Program

### Requirements for Dual-Degree Program

To successfully complete the dual-degree program in engineering, with the intent to transfer to the two schools that are currently affiliated with Albion College (see above), students must fulfill the following requirements.

# General Requirements

While at Albion College, each student must:

- Complete at least 24 units of college credit prior to transfer to an approved school of engineering. 16 of these units must be earned at Albion College.
- Maintain a minimum cumulative grade point average of 3.0 and a minimum grade point average in courses in chemistry, computer science, mathematics and physics of 3.0.
- Complete the writing competency requirement.
- Achieve successful transfer admission to an approved engineering program of study.

- Make a written application for a dual degree to the Albion College registrar. This application must be submitted by the end of the twelfth week of the student's junior year and receive the endorsement of the Engineering Advisory Committee (EAC).

While at the transfer engineering school, each student must:

- Maintain a minimum cumulative grade point average of 2.0.
- Complete at least eight units of college credit in an ABET accredited program at the transfer school. These courses must be approved by the EAC for Albion credit.

# Engineering Core Course Requirements

All students in the dual-degree program in engineering must complete the following core course requirements at Albion:

- Students must complete the College divisional requirements

## LA 101: First-Year Seminar

(1 Unit)
An interdisciplinary special topics seminar that emphasizes development of strong written and oral communication. Seminars help first-year students make a positive transition to college academics by focusing on the process of learning, in and out of the classroom. Seminars share a common weekly community meeting that emphasizes student academic and social transitions. Some travel is associated with many seminars. A course fee may apply. Open only to first-year students. *Staff.*

## CS 171: Introduction to Computer Science I

(1 Unit)
Prerequisite: MATH 125 (or equivalent) or permission of instructor.
Designed to be the first computer science course taken by students in mathematics and computer science. Topics include fundamentals of computation and algorithmic problem-solving, data types, control structures, the object-oriented programming paradigm and applications. Introduces a high-level programming language such as Java or Python. *Reimann.*

## E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

## MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a

brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 245: Multivariate Calculus

(1 Unit)
Prerequisite: MATH 143.
Vectors, inner and cross products, and vector-valued functions including parametric represetations of curves and surfaces in space. Partial differentiation, the chain rule, function gradients, implicit differentiation, multivariate optimization, Lagrange multipliers, multiple integrals and vector analysis, including divergence and curl of vector fields, as well as the theorems of Green, Stokes and Gauss. *Mason.*

## MATH 247: Differential Equations and Linear Algebra

(1 Unit)
Prerequisite: MATH 245.
First-order differential equations and numerical algorithms of Euler and Runge-Kutta. Linear algebraic systems, Gaussian elimination, row-echelon form matrix algebra, inverses and determinants. Vector spaces, subspaces, linear independence, bases, span, dimension, linear mappings and function spaces. Second and higher-order linear differential equations. Eigenvectors, eigenvalues and spectral decomposition methods. First-order linear differential systems, including solutions methods using matrix exponentials. Applications focus on problems in physics, chemistry, biology, economics and engineering. Additional topics may include nonlinear dynamical systems, stability theory, transform theory and power series solutions. *Mason.*

## PHYS 167: Analytical Physics I

(1 Unit)
Corequisite: MATH 141, or permission of instructor.
First semester of a calculus-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

## PHYS 168: Analytical Physics II

(1 Unit)
Prerequisite: PHYS 167. Corequisite: MATH 143 or permission of instructor.
Second semester of a calculus-based survey of general physics. Topics include electricity and magnetism, light and

optics, and select topics in modern physics. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff*.

### PHYS 243: Introduction to Mathematical Methods in Physics I

(.5 Unit)
Prerequisite: PHYS 168, or permission of instructor.
An introduction to the mathematical methods in Physics. Topics include statistical interpretation of data and distribution functions, functions of a complex variable, and Fourier analysis. *Staff.*

### PHYS 244: Introduction to Mathematical Methods in Physics II

(.5 Unit)
Prerequisites: PHYS 168 and PHYS 243, or permission of instructor.
A continuation of PHYS 243. Topics include Coordinate transformations and curvilinear coordinates, partial differential equations, matrices and linear algebra. *Staff*

### CHEM 152: Principles of Chemistry

(1 Unit)
Basic principles of stoichiometry, atomic and molecular structure, equilibrium, thermodynamics and kinetics. Thematic content will be used to explain how the foundational principles of chemistry can be used to explain the world around us. Topical applications and issues will vary with instructor. *Bieler, Harris, Lewis, McCaffrey, Metz, Rohlman, Streu.*

### CHEM 154: Organic Structure and Reactivity

(1 Unit)
Prerequisite: CHEM 152
This course builds on the atomic and molecular foundation developed in CHEM 152. Student are introduced to reactivity and mechanistic details of organic acid/base chemistry as well as model organic reactions. Quantitative reaction concepts necessary for organic chemistry are emphasized including: stoichiometry, thermochemistry, kinetic theory, thermodynamics, and dynamic equilibrium. Lecture and laboratory. *Harris, McCaffrey, Streu*

## Three of the Following Seven Albion College Core Requirements (3 Units):

- Artistic, Historical, and Textual Modes of Inquiry
- Environmental, Ethnicity, Gender, and Global Categories

## Notes

The modeling and scientific modes of inquiry are completed by the required courses in science and mathematics.

Departmental policies on awarding AP credit are listed under the respective department in the Programs of Study section of this catalog. However, transfer institutions' policies on accepting AP credit vary. Students should consult with the DDPE director regarding AP credit while planning Albion course work.

## Engineering Emphases Requirements

All students in the dual-degree program in engineering must select and complete one of the six areas of engineering emphasis listed below. General engineering is appropriate for students interested in aerospace, civil, marine, materials, mechanical or nuclear engineering.

## General Engineering:

### PHYS 191: Colloquium in Physics and Astronomy I

(.25 Unit)
Discussion of selected topics in physics and astronomy as determined by student and staff interest. Led by departmental faculty, visiting speakers and students. Students are required to read selected scientific papers, attend presentations and actively participate in discussions. Offered on a credit/no credit basis. *Staff.*

### PHYS 245: Electronics

(1 Unit)
Prerequisite: PHYS 168, or PHYS 116 with MATH 143, or permission of instructor.
The use of linear and integrated circuits, discrete devices, amplifiers, power supplies, oscillators and digital logic in experimental design and data acquisition. Applications of measurement instrumentation. Lecture and laboratory. *Staff.*

### PHYS 250: Introductory Modern Physics

(1 Unit)
Prerequisites: MATH 245 and PHYS 243, or permission of instructor. Corequisites: PHYS 244 and MATH 247, or permission of instructor (may also be taken as prerequisites).
A survey of modern physics. Topics include special relativity, the quantum theory of light and quantum mechanics of matter with applications in atomic, nuclear and elementary particle physics. *Staff.*

### MATH 275: Introduction to Solid Mechanics

(1 Unit)
Prerequisites: PHYS 167 and PHYS 168; MATH 245.
Statics: Forces, moments and couples; equilibrium of particles and rigid bodies; trusses and frames; distributed loads; Friction. Mechanics: Stress/strain, classification of material behavior, generalized Hooke's law. Engineering applications: Axial loads, torsion of circular rods and tubes, bending and shear stresses in beams, deflection of beams, combined stresses, stress and strain transformation, Mohr's circle, elastic stability/buckling of columns. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. Same as Physics 275. *Mason.*

## Biomedical Engineering:

### MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

### MATH 275: Introduction to Solid Mechanics

(1 Unit)
Prerequisites: PHYS 167 and PHYS 168; MATH 245.
Statics: Forces, moments and couples; equilibrium of particles and rigid bodies; trusses and frames; distributed loads; Friction. Mechanics: Stress/strain, classification of material behavior, generalized Hooke's law. Engineering applications: Axial loads, torsion of circular rods and tubes, bending and shear stresses in beams, deflection of beams, combined stresses, stress and strain transformation, Mohr's circle, elastic stability/buckling of columns. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. Same as Physics 275. *Mason.*

### PHYS 191: Colloquium in Physics and Astronomy I

(.25 Unit)
Discussion of selected topics in physics and astronomy as determined by student and staff interest. Led by departmental faculty, visiting speakers and students. Students are required to read selected scientific papers, attend presentations and actively participate in discussions. Offered on a credit/no credit basis. *Staff.*

### PHYS 250: Introductory Modern Physics

(1 Unit)
Prerequisites: MATH 245 and PHYS 243, or permission of instructor. Corequisites: PHYS 244 and MATH 247, or permission of instructor (may also be taken as prerequisites).
A survey of modern physics. Topics include special relativity, the quantum theory of light and quantum mechanics of matter with applications in atomic, nuclear and elementary particle physics. *Staff.*

## Chemical Engineering:

### CHEM 212: Organic Reactions and Mechanism

(1 Unit)
Prerequisite: CHEM 154.
A continued survey of the mechanisms and reactions of organic molecules focusing on aromatic and carbonyl compounds, and the application of organic reactions toward organic synthesis. Laboratory involves team-designed organic syntheses of biologically relevant molecules and/or synthetic methodology. *Harris, McCaffrey.*

### PHYS 191: Colloquium in Physics and Astronomy I

(.25 Unit)
Discussion of selected topics in physics and astronomy as determined by student and staff interest. Led by departmental faculty, visiting speakers and students. Students are required to read selected scientific papers, attend presentations and actively participate in discussions. Offered on a credit/no credit basis. *Staff.*

### PHYS 250: Introductory Modern Physics

(1 Unit)
Prerequisites: MATH 245 and PHYS 243, or permission of instructor. Corequisites: PHYS 244 and MATH 247, or permission of instructor (may also be taken as prerequisites).
A survey of modern physics. Topics include special relativity, the quantum theory of light and quantum mechanics of matter with applications in atomic, nuclear and elementary particle physics. *Staff.*

## Computer/Electrical Engineering:

## CS 173: Introduction to Computer Science II

(1 Unit)
Prerequisite: CS 171.
A continuation of CS 171. Emphasizes advanced object-oriented programming (interfaces, multiple inheritance, reflections), abstract data types (stacks, queues, lists, strings, trees, graphics, etc.) and analysis of algorithms. Other topics include recursion, searching and sorting, simulation and an introduction to some of the advanced areas of computer science, e.g., computer organization, artificial intelligence and user interfaces. Students refine their programming skills in a high-level programming language such as Java or Python. Laboratory. *Reimann.*

## MATH 239: Discrete Structures

(1 Unit)
Prerequisite: MATH 141.
A survey of discrete mathematics with topics selected from set theory, functions and relations, number theory, combinatorics, graph theory, logic (predicate calculus, quantifiers), introduction to proof techniques, and probability. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Kamischke.*

## PHYS 245: Electronics

(1 Unit)
Prerequisite: PHYS 168, or PHYS 116 with MATH 143, or permission of instructor.
The use of linear and integrated circuits, discrete devices, amplifiers, power supplies, oscillators and digital logic in experimental design and data acquisition. Applications of measurement instrumentation. Lecture and laboratory. *Staff.*

## PHYS 250: Introductory Modern Physics

(1 Unit)
Prerequisites: MATH 245 and PHYS 243, or permission of instructor. Corequisites: PHYS 244 and MATH 247, or permission of instructor (may also be taken as prerequisites).
A survey of modern physics. Topics include special relativity, the quantum theory of light and quantum mechanics of matter with applications in atomic, nuclear and elementary particle physics. *Staff.*

## CS 299: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisite: MATH 143 or CS 173.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation and a paper on a mathematics/computer science topic of personal interest. Same as MATH 299. *Staff.*

**OR**

## PHYS 191: Colloquium in Physics and Astronomy I

(.25 Unit)
Discussion of selected topics in physics and astronomy as determined by student and staff interest. Led by departmental faculty, visiting speakers and students. Students are required to read selected scientific papers, attend presentations and actively participate in discussions. Offered on a credit/no credit basis. *Staff.*

## Environmental/Geological Engineering:

### MATH 275: Introduction to Solid Mechanics

(1 Unit)
Prerequisites: PHYS 167 and PHYS 168; MATH 245.
Statics: Forces, moments and couples; equilibrium of particles and rigid bodies; trusses and frames; distributed loads; Friction. Mechanics: Stress/strain, classification of material behavior, generalized Hooke's law. Engineering applications: Axial loads, torsion of circular rods and tubes, bending and shear stresses in beams, deflection of beams, combined stresses, stress and strain transformation, Mohr's circle, elastic stability/buckling of columns. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. Same as Physics 275. *Mason.*

### BIOL 210: Cell and Molecular Biology

(1 Unit)
Prerequisite: BIOL 195. Prerequisite or corequisite: CHEM 152.
Focuses on organisms at the cellular and molecular levels, including biological chemistry, bioenergetics and metabolism, Mendelian and molecular genetics, cellular communication and the molecular control of the cell cycle. Builds upon skills from BIOL 195 to expand abilities in hypothesis testing and experimental design to produce an individual research paper, and to carry out more advanced statistical analyses. Lecture and laboratory. *Staff.*

### PHYS 250: Introductory Modern Physics

(1 Unit)
Prerequisites: MATH 245 and PHYS 243, or permission of instructor. Corequisites: PHYS 244 and MATH 247, or permission of instructor (may also be taken as prerequisites).
A survey of modern physics. Topics include special relativity, the quantum theory of light and quantum mechanics of matter with applications in atomic, nuclear and elementary particle physics. *Staff.*

**AND**

### PHYS 191: Colloquium in Physics and Astronomy I

(.25 Unit)
Discussion of selected topics in physics and astronomy as determined by student and staff interest. Led by departmental faculty, visiting speakers and students. Students are required to read selected scientific papers, attend presentations and actively participate in discussions. Offered on a credit/no credit basis. *Staff.*

## One Course From:

### GEOL 101: Introductory Geology

(1 Unit)
A survey course designed for liberal arts students covering many aspects of physical geology, the study of active earth processes. Labs illustrate lecture materials and the techniques used by geologists. One field trip. Complements the material covered in GEOL 103; either course can serve as an introductory course in geology. *Staff.*

### GEOL 104: Earth Resources and the Environment

(1 Unit)
Without earth resources, civilization would not exist. Gold, diamonds, water, oil, building materials—all of our material resources ultimately are derived from the earth. This course examines the origin and geologic occurrence of these materials and the environmental implications of their utilization. No laboratory. *Staff.*

### GEOL 115: Oceans, Atmosphere and Climate

(1 Unit)
Describes the world's oceans and atmosphere and considers how they interact with one another, and with humans. Topics include the geological evolution of the ocean basins, ocean-atmosphere circulation patterns, ocean currents, climate and weather patterns, storms and weather fronts, paleo-oceanography and the history of climate, and the chemical composition of the oceans. Emphasizes the role of the oceans in mediating global climate, global change, global dispersal of pollution and other environmental concerns. No laboratory. Offered in alternate years. *T. Lincoln, Wilch.*

## Industrial Engineering/Operations Research (IEOR):

### CS 299: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisite: MATH 143 or CS 173.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation and a paper on a mathematics/computer science topic of personal interest. Same as MATH 299. *Staff.*

### MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

### CS 173: Introduction to Computer Science II

(1 Unit)
Prerequisite: CS 171.
A continuation of CS 171. Emphasizes advanced object-oriented programming (interfaces, multiple inheritance, reflections), abstract data types (stacks, queues, lists, strings, trees, graphics, etc.) and analysis of algorithms. Other topics include recursion, searching and sorting, simulation and an introduction to some of the advanced areas of computer science, e.g., computer organization, artificial intelligence and user interfaces. Students refine their programming skills in a high-level programming language such as Java or Python. Laboratory. *Reimann.*

### E&M 211: Financial Accounting

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the world of business and accounting. Emphasis on understanding the concepts of net income, cash flow and financial condition. Communication of economic results through financial statements and reports. Development of analytical skills used in evaluating business success. Not open to first-year students. *Bedient, Carlson.*

## One From:

### MATH 311: Regression and Time Series Models

(1 Unit)
Covers two topics in detail: multiple linear regression analysis and time series analysis. Inherent to both topics: parsimonious linear models, parameter estimation, diagnostic checking, and forecasting. Uses the matrix approach for multiple linear regression, and the Box-Jenkins methodology for constructing autoregressive-integrated moving average (ARIMA) models for time series analysis. Employs the statistical package MINITAB for analyzing all real-world data sets. *Anderson.*

### MATH 326: Operations Research

(1 Unit)
Prerequisites: MATH 247.
An introduction to computational methods in mathematical modeling including linear programming and Markov chains. Applications in business, economics and systems engineering. Knowledge of probability is helpful. Offered in alternate years. Same as CS 326. *Mason.*

### MATH 349: Advanced Linear Algebra

(1 Unit)
Prerequisites: MATH 239 and MATH 247.
A continued study of linear algebra as begun in MATH 247. Topics may include abstract vector spaces, dimension, normed linear spaces, inner product spaces, canonical forms, unitary and Hermitian matrices, factorization, eigenvector analysis, and infinite-dimensional spaces. Offered in alternate years. *Bollman.*

### MATH 360: Mathematical Modeling

(1 Unit)
Prerequisites: MATH 247 and CS 171.
An introduction to analytical methods in mathematical modeling, including nonlinear optimization, dynamical systems and random processes. Applications in physics, biology, economics and systems engineering. Knowledge of probability and statistics is helpful. Same as CS 360. *Mason.*

## Note

DDPE students selecting IEOR must declare "DDPE: Mathematics-IEOR" as their major. All other DDPE students should declare "DDPE-Physics" as their major.

# Physics Minor

## Requirements for Minor

- Students pursuing the mathematics/physics interdepartmental major may not count those courses toward the physics minor.

## Five and One-quarter Units in Physics, Including:

## PHYS 167: Analytical Physics I

(1 Unit)
Corequisite: MATH 141, or permission of instructor.
First semester of a calculus-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

## PHYS 168: Analytical Physics II

(1 Unit)
Prerequisite: PHYS 167. Corequisite: MATH 143 or permission of instructor.
Second semester of a calculus-based survey of general physics. Topics include electricity and magnetism, light and optics, and select topics in modern physics. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

## PHYS 191: Colloquium in Physics and Astronomy I

(.25 Unit)
Discussion of selected topics in physics and astronomy as determined by student and staff interest. Led by departmental faculty, visiting speakers and students. Students are required to read selected scientific papers, attend presentations and actively participate in discussions. Offered on a credit/no credit basis. *Staff.*

## PHYS 243: Introduction to Mathematical Methods in Physics I

(.5 Unit)
Prerequisite: PHYS 168, or permission of instructor.
An introduction to the mathematical methods in Physics. Topics include statistical interpretation of data and distribution functions, functions of a complex variable, and Fourier analysis. *Staff.*

## PHYS 244: Introduction to Mathematical Methods in Physics II

(.5 Unit)
Prerequisites: PHYS 168 and PHYS 243, or permission of instructor.
A continuation of PHYS 243. Topics include Coordinate transformations and curvilinear coordinates, partial differential equations, matrices and linear algebra. *Staff*

## PHYS 250: Introductory Modern Physics

(1 Unit)
Prerequisites: MATH 245 and PHYS 243, or permission of instructor. Corequisites: PHYS 244 and MATH 247, or permission of instructor (may also be taken as prerequisites).
A survey of modern physics. Topics include special relativity, the quantum theory of light and quantum mechanics of matter with applications in atomic, nuclear and elementary particle physics. *Staff.*

## And One of the Following:

## PHYS 206: Astrophysics I: Stars, Galaxies and Cosmology

(1 Unit)
Prerequisites: MATH 141 and/or a previous physics course, or permission of instructor.
Provides an understanding of stars and how they work, and examines our galaxy. Covers topics related to cosmology, including our expanding universe. Intended for mathematics and science majors and minors and for students pursuing teacher certification in science. *Zellner*.

## PHYS 245: Electronics

(1 Unit)
Prerequisite: PHYS 168, or PHYS 116 with MATH 143, or permission of instructor.
The use of linear and integrated circuits, discrete devices, amplifiers, power supplies, oscillators and digital logic in experimental design and data acquisition. Applications of measurement instrumentation. Lecture and laboratory. *Staff.*

## PHYS 308: Optics

(1 Unit)
Prerequisite: PHYS 250, or permission of instructor.
An introduction to geometrical and physical optics which includes paraxial theory, polarization, interference and diffraction phenomena, and optical instruments. Topics in contemporary optics, including lasers, holography and Fourier optics will also be discussed. Lecture and laboratory. Offered in alternate years. *Staff.*

## PHYS 322: Solid State and Nuclear Physics

(1 Unit)
Prerequisite: PHYS 250.
An introduction to the modern quantum mechanical description of solids and the atomic nucleus. Lecture. Offered in alternate years. *Moreau.*

## PHYS 325: Theoretical Mechanics

(1 Unit)
Prerequisites: PHYS 244, MATH 247.
Review of elementary mechanics, one-dimensional motion, harmonic oscillator, motion in two and three dimensions, central force motion and orbital mechanics, many-particle systems, rotational motion, gravitation, moving coordinate systems and Lagrangian mechanics. *Zellner.*

## PHYS 336: Electricity and Magnetism

(1 Unit)
Prerequisites: PHYS 244, MATH 247.
A thorough discussion of Maxwell's electromagnetic field equations in differential form. Major topics are electrostatics, magnetostatics, electromagnetic induction and electromagnetic waves. *Moreau.*

## PHYS 350: Advanced Laboratory

(1 Unit)
Prerequisites: PHYS 245 and PHYS 250, or permission of instructor.
A junior-level laboratory designed to give students experience in independent research in experimental physics. Experiments include topics in optics, electricity and magnetism, atomic physics, and quantum physics. Strong emphasis is given to statistical analysis of data, error analysis, interpretation of measurements, techniques of measurement, and experimental design. Computer control of apparatus and computational analysis is also emphasized. *Staff.*

### PHYS 380: Mathematical Physics

(1 Unit)
Prerequisites: MATH 247, or permission of instructor.
Mathematical methods in physics including vector calculus, transform calculus, tensor analysis and special functions (viz. Fourier series, Gamma functions, Hermite polynomials, Bessel functions, spherical harmonics and Laguerre polynomials). Same as MATH 380. *Staff.*

### PHYS 384: Thermodynamics and Statistical Mechanics

(1 Unit)
Prerequisites: PHYS 250, MATH 247.
Classical thermodynamics, including kinetic theory and an introduction to statistical mechanics. *Moreau.*

### PHYS 387: Quantum Mechanics

(1 Unit)
Prerequisite: PHYS 250, or permission of instructor.
Non-relativistic quantum interpretation of matter and energy, employing both the wave mechanics of Schroedinger and the matrix mechanics of Heisenberg. *Staff.*

## Four Cognate Courses:

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### MATH 245: Multivariate Calculus

(1 Unit)
Prerequisite: MATH 143.
Vectors, inner and cross products, and vector-valued functions including parametric represetations of curves and surfaces in space. Partial differentiation, the chain rule, function gradients, implicit differentiation, multivariate optimization, Lagrange multipliers, multiple integrals and vector analysis, including divergence and curl of vector fields, as well as the theorems of Green, Stokes and Gauss. *Mason.*

### MATH 247: Differential Equations and Linear Algebra

(1 Unit)
Prerequisite: MATH 245.
First-order differential equations and numerical algorithms of Euler and Runge-Kutta. Linear algebraic systems, Gaussian elimination, row-echelon form matrix algebra, inverses and determinants. Vector spaces, subspaces, linear independence, bases, span, dimension, linear mappings and function spaces. Second and higher-order linear differential equations. Eigenvectors, eigenvalues and spectral decomposition methods. First-order linear differential systems, including solutions methods using matrix exponentials. Applications focus on problems in physics, chemistry, biology, economics and engineering. Additional topics may include nonlinear dynamical systems, stability theory, transform theory and power series solutions. *Mason.*

# Physics Minor, with Education Concentration

## Requirements for Minor with Education Concentration

## A Minimum of Five Units in Physics, Including:

### PHYS 167: Analytical Physics I

(1 Unit)
Corequisite: MATH 141, or permission of instructor.
First semester of a calculus-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

### PHYS 168: Analytical Physics II

(1 Unit)
Prerequisite: PHYS 167. Corequisite: MATH 143 or permission of instructor.
Second semester of a calculus-based survey of general physics. Topics include electricity and magnetism, light and optics, and select topics in modern physics. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

### PHYS 243: Introduction to Mathematical Methods in Physics I

(.5 Unit)
Prerequisite: PHYS 168, or permission of instructor.
An introduction to the mathematical methods in Physics. Topics include statistical interpretation of data and distribution functions, functions of a complex variable, and Fourier analysis. *Staff.*

### PHYS 244: Introduction to Mathematical Methods in Physics II

(.5 Unit)
Prerequisites: PHYS 168 and PHYS 243, or permission of instructor.
A continuation of PHYS 243. Topics include Coordinate transformations and curvilinear coordinates, partial differential equations, matrices and linear algebra. *Staff*

### PHYS 250: Introductory Modern Physics

(1 Unit)
Prerequisites: MATH 245 and PHYS 243, or permission of instructor. Corequisites: PHYS 244 and MATH 247, or permission of instructor (may also be taken as prerequisites).
A survey of modern physics. Topics include special relativity, the quantum theory of light and quantum mechanics of matter with applications in atomic, nuclear and elementary particle physics. *Staff.*

## And One of the Following:

### PHYS 105: Introductory Astronomy

(1 Unit)
Prerequisite: High school algebra.
A study of the night sky, planets, stars, galaxies, cosmology, and our place in the universe, along with discussion of observational techniques and space missions. Not intended for science and mathematics majors or minors or students who have taken physics or calculus in high school. Lecture and laboratory, with additional multiple observing sessions required. *Zellner.*

### PHYS 245: Electronics

(1 Unit)
Prerequisite: PHYS 168, or PHYS 116 with MATH 143, or permission of instructor.
The use of linear and integrated circuits, discrete devices, amplifiers, power supplies, oscillators and digital logic in experimental design and data acquisition. Applications of measurement instrumentation. Lecture and laboratory. *Staff.*

### PHYS 308: Optics

(1 Unit)
Prerequisite: PHYS 250, or permission of instructor.
An introduction to geometrical and physical optics which includes paraxial theory, polarization, interference and diffraction phenomena, and optical instruments. Topics in contemporary optics, including lasers, holography and Fourier optics will also be discussed. Lecture and laboratory. Offered in alternate years. *Staff.*

### PHYS 322: Solid State and Nuclear Physics

(1 Unit)
Prerequisite: PHYS 250.
An introduction to the modern quantum mechanical description of solids and the atomic nucleus. Lecture. Offered in alternate years. *Moreau.*

### PHYS 325: Theoretical Mechanics

(1 Unit)
Prerequisites: PHYS 244, MATH 247.

Review of elementary mechanics, one-dimensional motion, harmonic oscillator, motion in two and three dimensions, central force motion and orbital mechanics, many-particle systems, rotational motion, gravitation, moving coordinate systems and Lagrangian mechanics. *Zellner.*

### PHYS 336: Electricity and Magnetism

(1 Unit)
Prerequisites: PHYS 244, MATH 247.
A thorough discussion of Maxwell's electromagnetic field equations in differential form. Major topics are electrostatics, magnetostatics, electromagnetic induction and electromagnetic waves. *Moreau.*

### PHYS 350: Advanced Laboratory

(1 Unit)
Prerequisites: PHYS 245 and PHYS 250, or permission of instructor.
A junior-level laboratory designed to give students experience in independent research in experimental physics. Experiments include topics in optics, electricity and magnetism, atomic physics, and quantum physics. Strong emphasis is given to statistical analysis of data, error analysis, interpretation of measurements, techniques of measurement, and experimental design. Computer control of apparatus and computational analysis is also emphasized. *Staff.*

### PHYS 380: Mathematical Physics

(1 Unit)
Prerequisites: MATH 247, or permission of instructor.
Mathematical methods in physics including vector calculus, transform calculus, tensor analysis and special functions (viz. Fourier series, Gamma functions, Hermite polynomials, Bessel functions, spherical harmonics and Laguerre polynomials). Same as MATH 380. *Staff.*

### PHYS 384: Thermodynamics and Statistical Mechanics

(1 Unit)
Prerequisites: PHYS 250, MATH 247.
Classical thermodynamics, including kinetic theory and an introduction to statistical mechanics. *Moreau.*

### PHYS 387: Quantum Mechanics

(1 Unit)
Prerequisite: PHYS 250, or permission of instructor.
Non-relativistic quantum interpretation of matter and energy, employing both the wave mechanics of Schroedinger and the matrix mechanics of Heisenberg. *Staff.*

## One Cognate Course Chosen From:

In addition to the mathematics courses that are prerequisites for the required physics courses.

### BIOL 195: Ecology, Evolution and Biodiversity

(1 Unit)
Focuses on whole organisms and their evolutionary and ecological relationships. Evolutionary processes, biological diversity, conservation biology and human impacts on ecology and biodiversity are major themes. Skills introduced are

hypothesis testing, experimental design, use of primary literature in writing assignments and basic statistics. Lecture and laboratory. *Staff.*

### GEOL 101: Introductory Geology

(1 Unit)
A survey course designed for liberal arts students covering many aspects of physical geology, the study of active earth processes. Labs illustrate lecture materials and the techniques used by geologists. One field trip. Complements the material covered in GEOL 103; either course can serve as an introductory course in geology. *Staff.*

### GEOL 103: Introduction to Earth History

(1 Unit)
A survey course designed for liberal arts students and covering many aspects of historical geology, the study of evolving environments and life forms on earth. Labs utilize fossils, rock samples, maps and field trips to illustrate techniques used by historical geologists. Complements the material covered in GEOL 101; either course can serve as an introductory course in geology. *Staff.*

### GEOL 104: Earth Resources and the Environment

(1 Unit)
Without earth resources, civilization would not exist. Gold, diamonds, water, oil, building materials—all of our material resources ultimately are derived from the earth. This course examines the origin and geologic occurrence of these materials and the environmental implications of their utilization. No laboratory. *Staff.*

## Completion of Education Concentration

# Physics, Astronomy Emphasis, B.A.

## Requirements for Major with Astronomy Emphasis

## Nine and One-half Units in Physics, Including:

### PHYS 167: Analytical Physics I

(1 Unit)
Corequisite: MATH 141, or permission of instructor.
First semester of a calculus-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

### PHYS 168: Analytical Physics II

(1 Unit)
Prerequisite: PHYS 167. Corequisite: MATH 143 or permission of instructor.
Second semester of a calculus-based survey of general physics. Topics include electricity and magnetism, light and optics, and select topics in modern physics. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

## PHYS 191: Colloquium in Physics and Astronomy I

(.25 Unit)
Discussion of selected topics in physics and astronomy as determined by student and staff interest. Led by departmental faculty, visiting speakers and students. Students are required to read selected scientific papers, attend presentations and actively participate in discussions. Offered on a credit/no credit basis. *Staff.*

## PHYS 205: Planetary Astronomy

(1 Unit)
Prerequisite: High school algebra or permission of instructor.
Covers our solar system's origin and evolution, including Newton's and Kepler's Laws, planetary motion, planet characteristics, and detection of extrasolar planets. Investigates planetary and other images and data returned by solar system spacecraft. Considers recent developments in biochemistry and whether or not life could exist on other worlds. *Zellner.*

## PHYS 206: Astrophysics I: Stars, Galaxies and Cosmology

(1 Unit)
Prerequisites: MATH 141 and/or a previous physics course, or permission of instructor.
Provides an understanding of stars and how they work, and examines our galaxy. Covers topics related to cosmology, including our expanding universe. Intended for mathematics and science majors and minors and for students pursuing teacher certification in science. *Zellner.*

## PHYS 243: Introduction to Mathematical Methods in Physics I

(.5 Unit)
Prerequisite: PHYS 168, or permission of instructor.
An introduction to the mathematical methods in Physics. Topics include statistical interpretation of data and distribution functions, functions of a complex variable, and Fourier analysis. *Staff.*

## PHYS 244: Introduction to Mathematical Methods in Physics II

(.5 Unit)
Prerequisites: PHYS 168 and PHYS 243, or permission of instructor.
A continuation of PHYS 243. Topics include Coordinate transformations and curvilinear coordinates, partial differential equations, matrices and linear algebra. *Staff*

## PHYS 250: Introductory Modern Physics

(1 Unit)
Prerequisites: MATH 245 and PHYS 243, or permission of instructor. Corequisites: PHYS 244 and MATH 247, or permission of instructor (may also be taken as prerequisites).
A survey of modern physics. Topics include special relativity, the quantum theory of light and quantum mechanics of matter with applications in atomic, nuclear and elementary particle physics. *Staff.*

## PHYS 291: Colloquium in Physics and Astronomy II

(1/4 Unit)
Prerequisite: PHYS 191, junior or senior standing.

Discussion of selected topics in physics and astronomy as determined by student and staff interest. Led by departmental faculty, visiting speakers and students. Students are required to read selected scientific papers, attend presentations, actively participate in discussions, and give a presentation on a scientific paper of their choice. Offered on a credit/no credit basis. *Staff.*

### PHYS 325: Theoretical Mechanics

(1 Unit)
Prerequisites: PHYS 244, MATH 247.
Review of elementary mechanics, one-dimensional motion, harmonic oscillator, motion in two and three dimensions, central force motion and orbital mechanics, many-particle systems, rotational motion, gravitation, moving coordinate systems and Lagrangian mechanics. *Zellner.*

### PHYS 336: Electricity and Magnetism

(1 Unit)
Prerequisites: PHYS 244, MATH 247.
A thorough discussion of Maxwell's electromagnetic field equations in differential form. Major topics are electrostatics, magnetostatics, electromagnetic induction and electromagnetic waves. *Moreau.*

## And One of the Following Courses:

### PHYS 308: Optics

(1 Unit)
Prerequisite: PHYS 250, or permission of instructor.
An introduction to geometrical and physical optics which includes paraxial theory, polarization, interference and diffraction phenomena, and optical instruments. Topics in contemporary optics, including lasers, holography and Fourier optics will also be discussed. Lecture and laboratory. Offered in alternate years. *Staff.*

### PHYS 322: Solid State and Nuclear Physics

(1 Unit)
Prerequisite: PHYS 250.
An introduction to the modern quantum mechanical description of solids and the atomic nucleus. Lecture. Offered in alternate years. *Moreau.*

### PHYS 350: Advanced Laboratory

(1 Unit)
Prerequisites: PHYS 245 and PHYS 250, or permission of instructor.
A junior-level laboratory designed to give students experience in independent research in experimental physics. Experiments include topics in optics, electricity and magnetism, atomic physics, and quantum physics. Strong emphasis is given to statistical analysis of data, error analysis, interpretation of measurements, techniques of measurement, and experimental design. Computer control of apparatus and computational analysis is also emphasized. *Staff.*

### PHYS 380: Mathematical Physics

(1 Unit)
Prerequisites: MATH 247, or permission of instructor.

Mathematical methods in physics including vector calculus, transform calculus, tensor analysis and special functions (viz. Fourier series, Gamma functions, Hermite polynomials, Bessel functions, spherical harmonics and Laguerre polynomials). Same as MATH 380. *Staff.*

### PHYS 384: Thermodynamics and Statistical Mechanics

(1 Unit)
Prerequisites: PHYS 250, MATH 247.
Classical thermodynamics, including kinetic theory and an introduction to statistical mechanics. *Moreau.*

### PHYS 387: Quantum Mechanics

(1 Unit)
Prerequisite: PHYS 250, or permission of instructor.
Non-relativistic quantum interpretation of matter and energy, employing both the wave mechanics of Schroedinger and the matrix mechanics of Heisenberg. *Staff.*

## Upper-level Courses

A student contemplating study at the graduate level should include as many upper-level courses as are offered.

- Students pursuing the astronomy emphasis are required to attend all departmental colloquia.
- All courses for the major must be taken for a numerical grade, except those offered only on a credit/no credit basis.

## Four Cognate Courses:

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A

graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### MATH 245: Multivariate Calculus

(1 Unit)
Prerequisite: MATH 143.
Vectors, inner and cross products, and vector-valued functions including parametric represetations of curves and surfaces in space. Partial differentiation, the chain rule, function gradients, implicit differentiation, multivariate optimization, Lagrange multipliers, multiple integrals and vector analysis, including divergence and curl of vector fields, as well as the theorems of Green, Stokes and Gauss. *Mason.*

### MATH 247: Differential Equations and Linear Algebra

(1 Unit)
Prerequisite: MATH 245.
First-order differential equations and numerical algorithms of Euler and Runge-Kutta. Linear algebraic systems, Gaussian elimination, row-echelon form matrix algebra, inverses and determinants. Vector spaces, subspaces, linear independence, bases, span, dimension, linear mappings and function spaces. Second and higher-order linear differential equations. Eigenvectors, eigenvalues and spectral decomposition methods. First-order linear differential systems, including solutions methods using matrix exponentials. Applications focus on problems in physics, chemistry, biology, economics and engineering. Additional topics may include nonlinear dynamical systems, stability theory, transform theory and power series solutions. *Mason.*

# Physics, B.A.

## Requirements for Major

## Nine and One-half Units in Physics, Including:

### PHYS 167: Analytical Physics I

(1 Unit)
Corequisite: MATH 141, or permission of instructor.
First semester of a calculus-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

### PHYS 168: Analytical Physics II

(1 Unit)
Prerequisite: PHYS 167. Corequisite: MATH 143 or permission of instructor.
Second semester of a calculus-based survey of general physics. Topics include electricity and magnetism, light and optics, and select topics in modern physics. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

### PHYS 191: Colloquium in Physics and Astronomy I

(.25 Unit)
Discussion of selected topics in physics and astronomy as determined by student and staff interest. Led by departmental faculty, visiting speakers and students. Students are required to read selected scientific papers, attend presentations and actively participate in discussions. Offered on a credit/no credit basis. *Staff.*

## PHYS 243: Introduction to Mathematical Methods in Physics I

(.5 Unit)
Prerequisite: PHYS 168, or permission of instructor.
An introduction to the mathematical methods in Physics. Topics include statistical interpretation of data and distribution functions, functions of a complex variable, and Fourier analysis. *Staff.*

## PHYS 244: Introduction to Mathematical Methods in Physics II

(.5 Unit)
Prerequisites: PHYS 168 and PHYS 243, or permission of instructor.
A continuation of PHYS 243. Topics include Coordinate transformations and curvilinear coordinates, partial differential equations, matrices and linear algebra. *Staff*

## PHYS 245: Electronics

(1 Unit)
Prerequisite: PHYS 168, or PHYS 116 with MATH 143, or permission of instructor.
The use of linear and integrated circuits, discrete devices, amplifiers, power supplies, oscillators and digital logic in experimental design and data acquisition. Applications of measurement instrumentation. Lecture and laboratory. *Staff.*

## PHYS 250: Introductory Modern Physics

(1 Unit)
Prerequisites: MATH 245 and PHYS 243, or permission of instructor. Corequisites: PHYS 244 and MATH 247, or permission of instructor (may also be taken as prerequisites).
A survey of modern physics. Topics include special relativity, the quantum theory of light and quantum mechanics of matter with applications in atomic, nuclear and elementary particle physics. *Staff.*

## PHYS 291: Colloquium in Physics and Astronomy II

(1/4 Unit)
Prerequisite: PHYS 191, junior or senior standing.
Discussion of selected topics in physics and astronomy as determined by student and staff interest. Led by departmental faculty, visiting speakers and students. Students are required to read selected scientific papers, attend presentations, actively participate in discussions, and give a presentation on a scientific paper of their choice. Offered on a credit/no credit basis. *Staff.*

## PHYS 325: Theoretical Mechanics

(1 Unit)
Prerequisites: PHYS 244, MATH 247.
Review of elementary mechanics, one-dimensional motion, harmonic oscillator, motion in two and three dimensions, central force motion and orbital mechanics, many-particle systems, rotational motion, gravitation, moving coordinate systems and Lagrangian mechanics. *Zellner.*

### PHYS 336: Electricity and Magnetism

(1 Unit)
Prerequisites: PHYS 244, MATH 247.
A thorough discussion of Maxwell's electromagnetic field equations in differential form. Major topics are electrostatics, magnetostatics, electromagnetic induction and electromagnetic waves. *Moreau.*

### PHYS 350: Advanced Laboratory

(1 Unit)
Prerequisites: PHYS 245 and PHYS 250, or permission of instructor.
A junior-level laboratory designed to give students experience in independent research in experimental physics. Experiments include topics in optics, electricity and magnetism, atomic physics, and quantum physics. Strong emphasis is given to statistical analysis of data, error analysis, interpretation of measurements, techniques of measurement, and experimental design. Computer control of apparatus and computational analysis is also emphasized. *Staff.*

## And One of the Following Courses:

### PHYS 308: Optics

(1 Unit)
Prerequisite: PHYS 250, or permission of instructor.
An introduction to geometrical and physical optics which includes paraxial theory, polarization, interference and diffraction phenomena, and optical instruments. Topics in contemporary optics, including lasers, holography and Fourier optics will also be discussed. Lecture and laboratory. Offered in alternate years. *Staff.*

### PHYS 322: Solid State and Nuclear Physics

(1 Unit)
Prerequisite: PHYS 250.
An introduction to the modern quantum mechanical description of solids and the atomic nucleus. Lecture. Offered in alternate years. *Moreau.*

### PHYS 380: Mathematical Physics

(1 Unit)
Prerequisites: MATH 247, or permission of instructor.
Mathematical methods in physics including vector calculus, transform calculus, tensor analysis and special functions (viz. Fourier series, Gamma functions, Hermite polynomials, Bessel functions, spherical harmonics and Laguerre polynomials). Same as MATH 380. *Staff.*

### PHYS 384: Thermodynamics and Statistical Mechanics

(1 Unit)
Prerequisites: PHYS 250, MATH 247.
Classical thermodynamics, including kinetic theory and an introduction to statistical mechanics. *Moreau.*

### PHYS 387: Quantum Mechanics

(1 Unit)
Prerequisite: PHYS 250, or permission of instructor.
Non-relativistic quantum interpretation of matter and energy, employing both the wave mechanics of Schroedinger and the matrix mechanics of Heisenberg. *Staff.*

## Upper-level Courses

A student contemplating study at the graduate level should include as many upper-level courses as are offered.

- Students majoring in physics are required to attend all departmental colloquia.
- All courses for the major must be taken for a numerical grade, except those offered only on a credit/no credit basis.

## Four Cognate Courses:

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### MATH 245: Multivariate Calculus

(1 Unit)
Prerequisite: MATH 143.
Vectors, inner and cross products, and vector-valued functions including parametric represetations of curves and surfaces in space. Partial differentiation, the chain rule, function gradients, implicit differentiation, multivariate optimization, Lagrange multipliers, multiple integrals and vector analysis, including divergence and curl of vector fields, as well as the theorems of Green, Stokes and Gauss. *Mason.*

### MATH 247: Differential Equations and Linear Algebra

(1 Unit)
Prerequisite: MATH 245.
First-order differential equations and numerical algorithms of Euler and Runge-Kutta. Linear algebraic systems, Gaussian elimination, row-echelon form matrix algebra, inverses and determinants. Vector spaces, subspaces, linear independence, bases, span, dimension, linear mappings and function spaces. Second and higher-order linear differential equations. Eigenvectors, eigenvalues and spectral decomposition methods. First-order linear differential systems, including solutions methods using matrix exponentials. Applications focus on problems in physics, chemistry, biology, economics and engineering. Additional topics may include nonlinear dynamical systems, stability theory, transform theory and power series solutions. *Mason.*

## Note

Students whose major requires a physics cognate generally cannot satisfy this requirement with:

### PHYS 101: Basic Concepts of Physics

(1 Unit)
Prerequisite: High school algebra.
The basic ideas of physics in a historical and philosophical framework to give the student insight and appreciation of physics of this century and how physics relates to our contemporary society. Not intended for science majors. Lecture and laboratory. Offered in alternate years. *Staff*

### PHYS 102: The Physics of Urban and Environmental Problems

(1 Unit)
Prerequisite: High school algebra.
The physics of modern urban and environmental problems with respect to their causes, effects and possible cures. Topics include transportation, energy generation and transmission, pollution and resources. Not intended for science majors. Offered in alternate years. *Zellner.*

**OR**

### PHYS 105: Introductory Astronomy

(1 Unit)
Prerequisite: High school algebra.
A study of the night sky, planets, stars, galaxies, cosmology, and our place in the universe, along with discussion of observational techniques and space missions. Not intended for science and mathematics majors or minors or students who have taken physics or calculus in high school. Lecture and laboratory, with additional multiple observing sessions required. *Zellner.*

# Physics, with Education Concentration, B.A.

## Requirements for Major with Education Concentration

## A Minimum of Eight Units in Physics, Including:

### PHYS 167: Analytical Physics I

(1 Unit)
Corequisite: MATH 141, or permission of instructor.
First semester of a calculus-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

## PHYS 168: Analytical Physics II

(1 Unit)
Prerequisite: PHYS 167. Corequisite: MATH 143 or permission of instructor.
Second semester of a calculus-based survey of general physics. Topics include electricity and magnetism, light and optics, and select topics in modern physics. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

## PHYS 243: Introduction to Mathematical Methods in Physics I

(.5 Unit)
Prerequisite: PHYS 168, or permission of instructor.
An introduction to the mathematical methods in Physics. Topics include statistical interpretation of data and distribution functions, functions of a complex variable, and Fourier analysis. *Staff.*

## PHYS 244: Introduction to Mathematical Methods in Physics II

(.5 Unit)
Prerequisites: PHYS 168 and PHYS 243, or permission of instructor.
A continuation of PHYS 243. Topics include Coordinate transformations and curvilinear coordinates, partial differential equations, matrices and linear algebra. *Staff*

## PHYS 250: Introductory Modern Physics

(1 Unit)
Prerequisites: MATH 245 and PHYS 243, or permission of instructor. Corequisites: PHYS 244 and MATH 247, or permission of instructor (may also be taken as prerequisites).
A survey of modern physics. Topics include special relativity, the quantum theory of light and quantum mechanics of matter with applications in atomic, nuclear and elementary particle physics. *Staff.*

## PHYS 325: Theoretical Mechanics

(1 Unit)
Prerequisites: PHYS 244, MATH 247.
Review of elementary mechanics, one-dimensional motion, harmonic oscillator, motion in two and three dimensions, central force motion and orbital mechanics, many-particle systems, rotational motion, gravitation, moving coordinate systems and Lagrangian mechanics. *Zellner.*

## PHYS 336: Electricity and Magnetism

(1 Unit)
Prerequisites: PHYS 244, MATH 247.
A thorough discussion of Maxwell's electromagnetic field equations in differential form. Major topics are electrostatics, magnetostatics, electromagnetic induction and electromagnetic waves. *Moreau.*

Plus Two Units Selected From:

## PHYS 105: Introductory Astronomy

(1 Unit)
Prerequisite: High school algebra.
A study of the night sky, planets, stars, galaxies, cosmology, and our place in the universe, along with discussion of observational techniques and space missions. Not intended for science and mathematics majors or minors or students who have taken physics or calculus in high school. Lecture and laboratory, with additional multiple observing sessions required. *Zellner.*

## PHYS 206: Astrophysics I: Stars, Galaxies and Cosmology

(1 Unit)
Prerequisites: MATH 141 and/or a previous physics course, or permission of instructor.
Provides an understanding of stars and how they work, and examines our galaxy. Covers topics related to cosmology, including our expanding universe. Intended for mathematics and science majors and minors and for students pursuing teacher certification in science. *Zellner.*

## PHYS 245: Electronics

(1 Unit)
Prerequisite: PHYS 168, or PHYS 116 with MATH 143, or permission of instructor.
The use of linear and integrated circuits, discrete devices, amplifiers, power supplies, oscillators and digital logic in experimental design and data acquisition. Applications of measurement instrumentation. Lecture and laboratory. *Staff.*

## PHYS 308: Optics

(1 Unit)
Prerequisite: PHYS 250, or permission of instructor.
An introduction to geometrical and physical optics which includes paraxial theory, polarization, interference and diffraction phenomena, and optical instruments. Topics in contemporary optics, including lasers, holography and Fourier optics will also be discussed. Lecture and laboratory. Offered in alternate years. *Staff.*

## PHYS 322: Solid State and Nuclear Physics

(1 Unit)
Prerequisite: PHYS 250.
An introduction to the modern quantum mechanical description of solids and the atomic nucleus. Lecture. Offered in alternate years. *Moreau.*

## PHYS 350: Advanced Laboratory

(1 Unit)
Prerequisites: PHYS 245 and PHYS 250, or permission of instructor.
A junior-level laboratory designed to give students experience in independent research in experimental physics. Experiments include topics in optics, electricity and magnetism, atomic physics, and quantum physics. Strong emphasis is given to statistical analysis of data, error analysis, interpretation of measurements, techniques of measurement, and experimental design. Computer control of apparatus and computational analysis is also emphasized. *Staff.*

### PHYS 380: Mathematical Physics

(1 Unit)
Prerequisites: MATH 247, or permission of instructor.
Mathematical methods in physics including vector calculus, transform calculus, tensor analysis and special functions (viz. Fourier series, Gamma functions, Hermite polynomials, Bessel functions, spherical harmonics and Laguerre polynomials). Same as MATH 380. *Staff.*

### PHYS 384: Thermodynamics and Statistical Mechanics

(1 Unit)
Prerequisites: PHYS 250, MATH 247.
Classical thermodynamics, including kinetic theory and an introduction to statistical mechanics. *Moreau.*

### PHYS 387: Quantum Mechanics

(1 Unit)
Prerequisite: PHYS 250, or permission of instructor.
Non-relativistic quantum interpretation of matter and energy, employing both the wave mechanics of Schroedinger and the matrix mechanics of Heisenberg. *Staff.*

## Cognate Courses:

### MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

### MATH 245: Multivariate Calculus

(1 Unit)
Prerequisite: MATH 143.
Vectors, inner and cross products, and vector-valued functions including parametric represetations of curves and surfaces in space. Partial differentiation, the chain rule, function gradients, implicit differentiation, multivariate optimization, Lagrange multipliers, multiple integrals and vector analysis, including divergence and curl of vector fields, as well as the theorems of Green, Stokes and Gauss. *Mason.*

### MATH 247: Differential Equations and Linear Algebra

(1 Unit)
Prerequisite: MATH 245.
First-order differential equations and numerical algorithms of Euler and Runge-Kutta. Linear algebraic systems, Gaussian elimination, row-echelon form matrix algebra, inverses and determinants. Vector spaces, subspaces, linear independence, bases, span, dimension, linear mappings and function spaces. Second and higher-order linear differential equations. Eigenvectors, eigenvalues and spectral decomposition methods. First-order linear differential systems, including solutions methods using matrix exponentials. Applications focus on problems in physics, chemistry, biology, economics and engineering. Additional topics may include nonlinear dynamical systems, stability theory, transform theory and power series solutions. *Mason.*

- **Plus one cognate from the courses listed below:**

### BIOL 195: Ecology, Evolution and Biodiversity

(1 Unit)
Focuses on whole organisms and their evolutionary and ecological relationships. Evolutionary processes, biological diversity, conservation biology and human impacts on ecology and biodiversity are major themes. Skills introduced are hypothesis testing, experimental design, use of primary literature in writing assignments and basic statistics. Lecture and laboratory. *Staff.*

### GEOL 101: Introductory Geology

(1 Unit)
A survey course designed for liberal arts students covering many aspects of physical geology, the study of active earth processes. Labs illustrate lecture materials and the techniques used by geologists. One field trip. Complements the material covered in GEOL 103; either course can serve as an introductory course in geology. *Staff.*

### GEOL 103: Introduction to Earth History

(1 Unit)
A survey course designed for liberal arts students and covering many aspects of historical geology, the study of evolving environments and life forms on earth. Labs utilize fossils, rock samples, maps and field trips to illustrate techniques used by historical geologists. Complements the material covered in GEOL 101; either course can serve as an introductory course in geology. *Staff.*

### GEOL 104: Earth Resources and the Environment

(1 Unit)
Without earth resources, civilization would not exist. Gold, diamonds, water, oil, building materials—all of our material resources ultimately are derived from the earth. This course examines the origin and geologic occurrence of these materials and the environmental implications of their utilization. No laboratory. *Staff.*

## Completion of Education Concentration

# Political Science

# Faculty

**Carrie Booth Walling**, chair and associate professor.
B.A., Michigan State University; MSc.Econ., University of Wales Aberystwyth (UK); M.A., Ph.D., University of Minnesota. Appointed 2011.

**William D. Rose**, professor.
B.A., J.D., University of Toledo; Ph.D., University of Massachusetts, Amherst. Appointed 2001.

**Dawid Tatarczyk**, assistant professor.
B.A., Oakland University; M.P.A., Oakland University, Ph.D., Western Michigan University. Appointed 2019.

# Introduction

The department offers students the opportunity to pursue either a major or a minor in political science. In relatively small, discussion-oriented classes, students engage with questions fundamental to the academic study of politics. For example, how does a critical engagement with politics and political thought help us to understand power in contemporary and historical terms? What sorts of power relationships do we see at work in modern institutions such as states, global capital, and the media? And, how do subordinate groups and individuals resist and transform systems of power?

In our department, we explore these questions and more, by exposing students to multiple perspectives on the most consequential, often controversial, issues of our times. Such issues may include questions of war and peace, democracy and rule of law, the environment, the delicate human rights balance between security and freedom, and the evolving conception of what it means to be a citizen. Whatever the issue before us, the goal of the department is to cultivate in its students an ability to critically examine political questions from a variety of perspectives, and enable them to better interpret their own experience of the world. As measures of our success in meeting these goals, we expect students to: demonstrate knowledge of the interconnections of political institutions, movements, concepts, and events from multiple intersecting vantage points; identify important contested assumptions, ideas, and intellectual debates in the relevant scholarly literature; and pose critical questions about power relations as they investigate key political questions in a globalizing world.

Many of our students seek to translate what they have learned in the classroom to 'real world' experiences beyond the campus gates, in the form of internships and service-learning activities. Upon graduation, some of our students choose to pursue graduate study in political science and related disciplines. A significant number of our graduates opt for law school. Our graduates have been uniquely successful in obtaining admission to some of the finest law schools in the United States. Finally, many of our students seek out immediate employment upon graduation, pursuing careers in teaching, public policy, business, and government-related activities.

Political Science Department Website

# Career Opportunities

An undergraduate major in political science is used by many students as a background for graduate study—and eventually employment—in such fields as law, public policy, public administration, political science, business administration and international relations. Other fields which may be directly open to graduates are public opinion and market research, social work, NGO careers, municipal management, secondary school teaching, TV and radio, journalism, lobbying, criminal justice, campaign management and legislative staff work.

# Department Policy for Advanced Placement Credit

Students who earn a 4 or 5 on the Advanced Placement (AP) exam in American government will receive one unit of credit as Political Science 190. This unit does not count toward the political science major but does count toward the graduation requirement of 32 units.

# Student Learning Outcomes

Students graduating with a major or minor in political science at Albion College will achieve the following learning outcomes.

1. Students will understand the major subfields of political science (American Politics, Comparative Politics, International Relations, and Political Theory), their relationship to the larger discipline, and develop a strong grasp of the principal concepts, ideas, theoretical frameworks, and methods of inquiry central to each subfield.
2. Students will understand political governance structures, institutions, processes, cultures, and policies within and across nations and how they shape and are shaped by political actors.
3. Students will link theory and practice, and pose critical questions about power relations as they apply their political science knowledge and skills to addressing political problems in a globalizing world. They will acquire the knowledge and skills necessary for engaged membership in their political community.
4. Students will critically engage and evaluate complex arguments and texts, and develop textually supported, evidence-based arguments that they can effectively communicate.
5. Students will learn, develop, and use political science research methods to complete an independent research project which includes: creating an effective research design, evaluating the validity of competing knowledge claims, developing persuasive arguments and defending them with sound evidence.

# Political Science Minor

## Requirements for Minor

## Six Units in Political Science, Including:

### PLSC 100: Introduction to Political Inquiry

(1 Unit)
Examines the history of the discipline, and surveys principal approaches to describing and explaining political phenomena, including qualitative and quantitative analysis and moving from the behavioralism of the late 1940s, to critical theories, interpretive approaches, and rational choice models of later generations, and on to postmodern critiques challenging the idea that political science can be a science. *Dabney, Grossman, Rose, Walling.*

- At least one 100-level course from each of the three streams of inquiry
- Two elective one-unit political science courses taken at the 300 level.

# Political Science Minor, with Education Concentration

## Requirements for Minor with Education Concentration

### HIST 131: The United States from Colonization to the Civil War

(1 Unit)
Introductory survey of United States history from pre-settlement of Europeans through the fall of Reconstruction. Examines the multicultural origins of the United States; the economic, social and political course to independence; the early national period; the Jacksonian era; and the causes and results of the Civil War. Also focuses on historical methodology. *Sacks.*

## A Minimum of Five Units in Political Science, Including:

### PLSC 101: Politics of American Democracy

(1 Unit)
An overview of the dynamics and structure of the American political system: the Constitution, civil liberties, Congress, the Presidency, bureaucracy, interest groups, political parties, and voting behavior. Contrasts the principles of democratic action with a behind-the-scenes examination of how public policy is actually made. *Dabney, Grossman, Rose.*

### PLSC 102: Introduction to Comparative Politics

(1 Unit)
Examines the political institutions and processes of countries around the world. Emphasizes how to make meaningful comparisons between systems in different countries. Covers conditions for and functions of democracy, with an emphasis on how different kinds of democracies work. Provides a framework for comparison and considers the United States in comparative perspective. Topics include the vibrancy of democracy, the centrality of political and electoral institutions, the possibility of revolution, and the power of ethnicity. *Dabney.*

**OR**

### PLSC 103: Introduction to International Politics

(1 Unit)
Examines and evaluates competing theoretical approaches ("paradigms") which seek to explain inter-state war, international institutions and the global economy. Explores scholarly debates about the implications of international anarchy and national sovereignty. Focuses on the causes of violent conflict, the emergence of human rights norms and international courts, the dilemmas of humanitarian intervention, and the implications of global inequality. Part I examines competing theoretical perspectives in the discipline; Part II,approaches to studying war, violence and conflict; Part III, international institutions; Part IV, issues related to the global economy and international development. *Grossman, Walling.*

### PLSC 224: Constitutional Law and Politics

(1 Unit)
Explores the role of the U.S. Supreme Court in political struggles over the distribution and uses of power in the American constitutional system. Covers issues including the division of powers between state and national governments, and the branches of the federal government; economic powers of private actors and governmental regulators; the authority of governments to enforce or transform racial and gender hierarchies; and the powers of individuals to make basic choices, such as a woman's power to have an abortion. Emphasizes how the tasks of justifying the Supreme Court's own power, and constitutionalism more broadly understood, contribute to logically debatable, but politically powerful constitutional arguments. Also examines the politics of constitutional interpretation. Readings include Supreme Court decisions and background materials on their theoretical, historical and political context. *Rose.*

### PLSC 256: Human Rights

(1 Unit)
Introduces the key concepts and theoretical tools for understanding human rights and human rights policy in the context of the modern world. Examines human rights in a global comparative context with emphases on all the major world regions. Draws on the central theories and concepts of comparative politics and international relations to explain how and why governments protect (or fail to) human rights and to examine the intersection among citizens, governments, and non-governmental organizations that work to investigate and protect against human rights abuses. *Walling.*

### PLSC 336: International Relations

(1 Unit)
Prerequisites: PLSC 100 and one of either PLSC 102 or PLSC 103.
A study of the behavior of nations, including topics such as: national power, balance of power, deterrence, diplomacy, collective security, international law, international organization and disarmament. *Grossman, Walling.*

## Completion of Education Concentration

# Political Science, B.A.

## Requirements for Major

- A minimum of nine units is required to satisfy the major in political science. The major is comprised of three streams of inquiry: American politics and policy; international and comparative politics; and law, jurisprudence, and political thought. Political science majors are required to take and pass PLSC 100: Introduction to Political Inquiry as the gateway course to all upper-level (300- and 400-level) courses in the major. In addition, students are required to take and pass at least one entry-level course for each of the three streams (PLSC 101; either PLSC 102 or PLSC 103; and PLSC 105). Students are also required to take and pass at least one upper-level one-unit course (at the 300 level) in each stream of inquiry. Finally, all political science majors are required to take and pass one 400-level capstone seminar. It is expected that seven of the nine units in political science will be taken at Albion College. Other arrangements can be made for bona fide transfer students and students in approved off-campus programs. Exceptions are at the discretion of the department chair after consultation with other faculty members in the department.
- No more than one unit of PLSC 391 or PLSC 392 (Internship) may be counted toward a major.
- All courses for the major must be taken for a numerical grade, except those offered only on a credit/no credit basis. In order for a course to count for the political science major, the student must earn at least a 2.0 in the course.
- Political science majors are strongly encouraged to achieve basic competency in statistics (MATH 209 is appropriate) and at least one foreign language.

# Political Science, with Education Concentration, B.A.

## Requirements for Major with Education Concentration

## A Minimum of Nine Units in Political Science, Including:

### PLSC 100: Introduction to Political Inquiry

(1 Unit)
Examines the history of the discipline, and surveys principal approaches to describing and explaining political phenomena, including qualitative and quantitative analysis and moving from the behavioralism of the late 1940s, to critical theories, interpretive approaches, and rational choice models of later generations, and on to postmodern critiques challenging the idea that political science can be a science. *Dabney, Grossman, Rose, Walling.*

## PLSC 101: Politics of American Democracy

(1 Unit)
An overview of the dynamics and structure of the American political system: the Constitution, civil liberties, Congress, the Presidency, bureaucracy, interest groups, political parties, and voting behavior. Contrasts the principles of democratic action with a behind-the-scenes examination of how public policy is actually made. *Dabney, Grossman, Rose.*

## PLSC 102: Introduction to Comparative Politics

(1 Unit)
Examines the political institutions and processes of countries around the world. Emphasizes how to make meaningful comparisons between systems in different countries. Covers conditions for and functions of democracy, with an emphasis on how different kinds of democracies work. Provides a framework for comparison and considers the United States in comparative perspective. Topics include the vibrancy of democracy, the centrality of political and electoral institutions, the possibility of revolution, and the power of ethnicity. *Dabney.*

OR

## PLSC 103: Introduction to International Politics

(1 Unit)
Examines and evaluates competing theoretical approaches ("paradigms") which seek to explain inter-state war, international institutions and the global economy. Explores scholarly debates about the implications of international anarchy and national sovereignty. Focuses on the causes of violent conflict, the emergence of human rights norms and international courts, the dilemmas of humanitarian intervention, and the implications of global inequality. Part I examines competing theoretical perspectives in the discipline; Part II,approaches to studying war, violence and conflict; Part III, international institutions; Part IV, issues related to the global economy and international development. *Grossman, Walling.*

## PLSC 105: Introduction to Political Thought

(1 Unit)
Offers an introduction to political theory. Explores major debates within the field, both in contemporary and canonical work. Proceeds both thematically, examining such themes as liberty, justice, democracy, political resistance, and power, and historically, situating theorists' writings within the historical context in which they were written and read. Also considers the relationship between political theory, political practice and the other subfields of political science. *Rose.*

## PLSC 302: Public Policy, Interest Groups, and the American Welfare State

(1 Unit)
Prerequisites: Sophomore standing, PLSC 100 and PLSC 101.
This seminar analyzes the United States and the development of a robust middle-class welfare state: i.e., the "hidden" welfare state. While US centric, the seminar does not ignore a comparative analysis of other types of welfare states. The seminar analyzes key scholarship on contemporary state theory and American political development (APD) and engages broad questions about public policy, state formation, bureaucratic development, and the rise and fall of the New Deal/Administrative State (1932-1980). Emphasis will be on the fundamental role that interest group liberalism (IGL) has on the public policy arenas of: race relations, civil rights & civil liberties, healthcare, education, urban affairs, rural politics, and the way that IGL has configured law, legislation, and liberal democratic structures in the USA are the primary areas for analysis. The seminar will provide an opportunity for students that wish to in a purposely cross-disciplinary approach: an approach that draws heavily on scholarship in politics, history, and political sociology. *Staff*

### PLSC 224: Constitutional Law and Politics

(1 Unit)
Explores the role of the U.S. Supreme Court in political struggles over the distribution and uses of power in the American constitutional system. Covers issues including the division of powers between state and national governments, and the branches of the federal government; economic powers of private actors and governmental regulators; the authority of governments to enforce or transform racial and gender hierarchies; and the powers of individuals to make basic choices, such as a woman's power to have an abortion. Emphasizes how the tasks of justifying the Supreme Court's own power, and constitutionalism more broadly understood, contribute to logically debatable, but politically powerful constitutional arguments. Also examines the politics of constitutional interpretation. Readings include Supreme Court decisions and background materials on their theoretical, historical and political context. *Rose.*

### PLSC 256: Human Rights

(1 Unit)
Introduces the key concepts and theoretical tools for understanding human rights and human rights policy in the context of the modern world. Examines human rights in a global comparative context with emphases on all the major world regions. Draws on the central theories and concepts of comparative politics and international relations to explain how and why governments protect (or fail to) human rights and to examine the intersection among citizens, governments, and non-governmental organizations that work to investigate and protect against human rights abuses. *Walling.*

### PLSC 336: International Relations

(1 Unit)
Prerequisites: PLSC 100 and one of either PLSC 102 or PLSC 103.
A study of the behavior of nations, including topics such as: national power, balance of power, deterrence, diplomacy, collective security, international law, international organization and disarmament. *Grossman, Walling.*

- One elective one-unit political science course taken at the 200- or 300-level.

## Additional Requirements

### HIST 131: The United States from Colonization to the Civil War

(1 Unit)
Introductory survey of United States history from pre-settlement of Europeans through the fall of Reconstruction. Examines the multicultural origins of the United States; the economic, social and political course to independence; the

early national period; the Jacksonian era; and the causes and results of the Civil War. Also focuses on historical methodology. *Sacks.*

- **No more than one unit of the following may be counted towared the major:**

### PLSC 391: Internship

(1/2 Unit)
Prerequisite: Permission of department.
Offered on a credit/no credit basis. *Staff.*

### PLSC 392: Internship

(1 Unit)
Prerequisite: Permission of department.
Offered on a credit/no credit basis. *Staff.*

- All courses for the major must be taken for a numerical grade, except those offered only on a credit/no credit basis. In order for a course to count for the political science major, the student must earn at least a 2.0 in the course.
- Political science majors are strongly encouraged to achieve basic competency in statistics (MATH 209 is appropriate) and at least one foreign language.

## Completion of Education Concentration

## Note

It is expected that seven of the nine units in political science will be taken at Albion College. Other arrangements can be made for bona fide transfer students and students in approved off-campus programs. Exceptions are at the discretion of the department chair after consultation with other faculty members in the department.

# Psychological Science

# Faculty

**Mareike B. Wieth**, chair and professor.
B.A., Kenyon College; M.A., Ph.D., Michigan State University. Appointed 2005.

**Shanti A. Brown**, assistant professor.
B.A., Albion College; Ph.D. Central Michigan University. Appointed 2020.

**Andrew N. Christopher**, professor.
B.B.A., Stetson University; M.B.A., Southern Methodist University; M.S., Ph.D., University of Florida. Appointed 2001.

**Holger B. Elischberger,** professor.
B.A., M.A., University of Würzburg; Ph.D., University of North Carolina, Chapel Hill. Appointed 2005.

**Andrea P. Francis**, associate professor.
B.S., Colorado State University; M.A., Ph.D., Michigan State University. Appointed 2010.

**Eric D. Hill,** associate professor.
B.A., Oglethorpe University; M.A., Ph.D., Arizona State University. Appointed 2010.

**Tammy J. Jechura**, associate professor.
B.S., Bowling Green State University; M.A., Ph.D., University of Michigan. Appointed 2004.

**Ryan A. Selleck**, assistant professor.
B.S., University of Michigan; Ph.D., University of Wisconsin, Madison. Appointed 2020.

# Introduction

Psychological science studies the behavior and mental processes of humans and other animals. As a discipline, psychology spans the natural and social sciences and is based on rigorous scientific analysis and methodologies. Specialty areas represented in the department include clinical, cognitive, developmental, educational, industrial/organizational, physiological, health, and social psychology.

Students who major in psychological science have the oppurtunity to engage in research and internship experiences through laboratory courses, directed study projects, honors theses, and the departments' internship program (Psychology Practicum). Our undergraduate research opportunities teach students to develop testable questions and hypotheses, operationally define variables, gather and analyze data, interpret results, and write research reports using APA format, all of which are skills that are valued in many work settings and necessary for graduate study. During their junior and senior years, students are able to participate in the department's internship program (Psychology Practicum) that allows them to work in a variety of field settings (e.g., mental hospitals, juvenile homes, counseling centers, schools and human resource departments), thus further providing hands on experience within different areas of psychology. Finally, in all of our courses as well as in research and intership experiences, the Department of Psychological Science emphasizes the importance of critical thinking, communication and research skills.

Psychological Science Department Website

# Career Opportunities

The Department of Psychological Science offers a variety of courses and opportunities designed to prepare students for work in psychology and psychology related fields (e.g., research, human services settings and secondary education). In addition, the department of psychological science has a proven track record of success in preparing students for graduate studies in all areas of psychology. Furthermore, the psychological science major at Albion College also provides excellent preparation for a large variety of other professional areas, including law, medicine and business.

# Special Features

Because the department has a strong commitment to hands-on experiences, upper-level students are strongly encouraged to make use of Olin Hall's laboratory facilities for investigating memory, psychophysiology, cognition, language, learning, personality, developmental and social psychology in collaboration with faculty. Furthermore, students in their junior or senior year are encouraged to participate in a psychology based internship through out Psychology Practicum experiences. Instruction in the Department of Psychological Science includes lecture and class discussion as well as laboratory experiences.

Our major has been approved as a certifiable secondary school teaching major by the State Department of Education.

Albion maintains a chapter of Psi Chi, the national psychology honorary society.

# Student Learning Outcomes for the Major

1. Students will be able to describe key concepts, principles, and overarching themes in psychology.
2. Students will be able to use scientific reasoning to interpret psychological phenomena.
3. Students will be able to effectively communicate psychological research.
4. Students will be able to apply psychological content and skills to career goals.
5. Students will be able to apply ethical standards to evaluate psychological science and practice.

# Student Learning Outcomes for the Minor

1. Students will be able to describe key concepts, principles, and overarching themes in psychology.
2. Students will be able to use scientific reasoning to interpret psychological phenomena.
3. Students will be able to apply Psychological content and skills to career goal.

# Student Learning Outcomes for Psychological Science, with Secondary Education Certification, B.A.

1. Students will be able to describe key concepts, principles, and overarching themes in psychology.
2. Students will be able to use scientific reasoning to interpret psychological phenomena.
3. Students will be able to effectively communicate psychological research.
4. Students will be able to apply psychological content and skills to career goals.
5. Students will be able to apply ethical standards to evaluate psychological science and practice.
6. Students will be able to complete requirements for eligibility for certification.

# Student Learning Outcomes for Psychological Science, with Secondary Educatin Certification, Minor

1. Students will be able to describe key concepts, principles, and overarching themes in psychology.
2. Students will be able to use scientific reasoning to interpret psychological phenomena.
3. Students will be able to apply psychological content and skills to career goal.
4. Students will be able to complete requirements for eligibility for certification.

# Psychological Science Minor

## Requirements for Minor

## A Minimum of Five Units in Psychology, Including:

### PSYC 101: Introduction to Psychology

(1 Unit)
An introduction to psychology's major areas of study, theoretical approaches, empirical findings, and research methodologies. Provides students with a broad overview of the field of psychology and examines the nature of psychology as a discipline. Addresses Psychology's major sub-disciplines, which range from the borders of biology to the borders of computer science to the borders of sociology. Introduction to Psychology is a prerequisite for all other psychology courses. *Staff.*

### PSYC 204: Research Methods and Statistics I

(1 Unit)
Prerequisites: PSYC 101 with a grade of 2.0 or higher and a 200-level lecture-based course, or permission of instructor. An introduction to the theory and practice of research methods in psychology with an emphasis on descriptive designs. Focuses on naturalistic, archival, and survey methodology with discussion of descriptive statistics, probability, Chi-square, z-scores, correlation, and multiple regression. Lecture and laboratory. Course normally taken during second year. *Christopher, Elischberger, Francis, Hill, Jechura, Wieth, Staff.*

## Additional Requirements

- At least one course from List 1 and one course from List 2.
- All courses for the minor must be taken for a numerical grade, except those offered only on a credit/no credit basis.

# Psychological Science Minor, with Education Concentration

## Requirements for Minor with Education Concentration

## A Minimum of Five Units in Psychology, Including:

### PSYC 101: Introduction to Psychology

(1 Unit)
An introduction to psychology's major areas of study, theoretical approaches, empirical findings, and research methodologies. Provides students with a broad overview of the field of psychology and examines the nature of psychology as a discipline. Addresses Psychology's major sub-disciplines, which range from the borders of biology to the borders of computer science to the borders of sociology. Introduction to Psychology is a prerequisite for all other psychology courses. *Staff.*

### PSYC 204: Research Methods and Statistics I

(1 Unit)
Prerequisites: PSYC 101 with a grade of 2.0 or higher and a 200-level lecture-based course, or permission of instructor. An introduction to the theory and practice of research methods in psychology with an emphasis on descriptive designs. Focuses on naturalistic, archival, and survey methodology with discussion of descriptive statistics, probability, Chi-square, z-scores, correlation, and multiple regression. Lecture and laboratory. Course normally taken during second year. *Christopher, Elischberger, Francis, Hill, Jechura, Wieth, Staff.*

- At least one course from List 1 and one course from List 2.
- All courses for the minor must be taken for a numerical grade, except those offered only on a credit/no credit basis.

### PSYC 251: Child and Adolescent Development

(1 Unit)
Prerequisite: PSYC 101.
Focuses on physical, cognitive, social and emotional development with emphasis on the periods of infancy, childhood and adolescence. Reviews methods for studying the developing person and major theoretical approaches. *Elischberger, Francis, Keyes, Staff.*

- All courses for the minor must be taken for a numerical grade, except those offered only on a credit/no credit basis.

## Completion of All Other Requirements for Teacher Certification.

Secondary Education Concentration (6-12)*

# Psychological Science, B.A.

## Requirements for Major

## A Minimum of Nine Units in Psychology, Including:

Students must complete a 200-level lecture class or attain junior status before starting the research design and statistical analysis course sequence. One List 1 or one List 2 class must be a 300-level laboratory course, and students must take a minimum of three 300-level units or above (this may include internship/practicum and directed study). All 300-level courses require at least PSYC 204 as a prerequisite. Students must plan their course schedules carefully to ensure that all prerequisites are met and in proper sequence.

### PSYC 101: Introduction to Psychology

(1 Unit)
An introduction to psychology's major areas of study, theoretical approaches, empirical findings, and research methodologies. Provides students with a broad overview of the field of psychology and examines the nature of psychology as a discipline. Addresses Psychology's major sub-disciplines, which range from the borders of biology to the borders of computer science to the borders of sociology. Introduction to Psychology is a prerequisite for all other psychology courses. *Staff.*

### PSYC 204: Research Methods and Statistics I

(1 Unit)
Prerequisites: PSYC 101 with a grade of 2.0 or higher and a 200-level lecture-based course, or permission of instructor.
An introduction to the theory and practice of research methods in psychology with an emphasis on descriptive designs. Focuses on naturalistic, archival, and survey methodology with discussion of descriptive statistics, probability, Chi-square, z-scores, correlation, and multiple regression. Lecture and laboratory. Course normally taken during second year. *Christopher, Elischberger, Francis, Hill, Jechura, Wieth, Staff.*

### PSYC 306: Research Methods and Statistics II

(1 Unit)
Prerequisite: PSYC 204 with a grade of 2.0 or higher, or permission of instructor.
Further exploration of the theory and practice of research methods in psychology with an emphasis on experimental designs. Focuses on both simple and complex designs with discussion of z-test, t-test, ANOVA (one-way, repeated measures and factorial), and MANOVA. Lecture and laboratory. Course normally taken during second year. *Christopher, Elischberger, Hill, Jechura, Wieth, Staff.*

- Two units from each of the three lists below.

## List 1: Social Science

*Please note that you cannot complete the List 1 requirement by taking only the combination of PSYC 236 plus PSYC 336, or the combination of PSYC 251 plus PSYC 254.

### PSYC 236: Social Psychology

(1 Unit)
Prerequisite: PSYC 101.
The scientific study of the ways people think, feel and behave in social situations. Topics include self-perception and self-presentation, person perception, stereo-typing and prejudice, interpersonal attraction and close relationships, altruism, aggression, attitudes and persuasion, conformity, and group processes. Also examines theory and research in several applied areas of social psychology, including law and health. *Hill, Staff.*

### PSYC 251: Child and Adolescent Development

(1 Unit)
Prerequisite: PSYC 101.
Focuses on physical, cognitive, social and emotional development with emphasis on the periods of infancy, childhood and adolescence. Reviews methods for studying the developing person and major theoretical approaches. *Elischberger, Francis, Keyes, Staff.*

### PSYC 254: Lifespan Development

(1 Unit)
Prerequisite: PSYC 101
Focuses on physical, cognitive, social and emotional development across the lifespan. Adopts an integrative and interdisciplinary approach to understanding the human experience from birth to death. *Elischberger, Keyes, Staff.*

### PSYC 265: Psychology of Mental Illness

(1 Unit)
Prerequisite: PSYC 101.

This course offers an introduction to the historical origins, perspectives, theories, methods, and empirical findings of psychopathology and clinical psychology. Throughout the semester, students will gain greater understanding of the identification and treatment of psychological disorders. Students will be encouraged to critically examine the construct of mental health and to deepen their empathy for those experiencing mental illness through lecture, case study review, class assignments, and discussion. Throughout the course, students will be exposed to the complexities of human behavior and psychological difficulties, as well as the cultural, economic, and ethical issues that arise in diagnosing and treating mental illness. *Keyes, Staff.*

### PSYC 267: Psychology of Personality

(1 Unit)
Prerequisite: PSYC 101.
Examines the major historical theories of personality and their influence on modern, empirically-derived theories of personality. Attention is given to each personality theory's relevance to historical and current events, as well as to the students' own personal and professional development. *Christopher.*

### PSYC 336: Research in Social Psychology

(1 Unit)
Prerequisites: PSYC 306 with a grade of 2.0 or higher, or permission of instructor.
Focuses on either social cognitive processes or interpersonal relations. Guides the upper-division student through an intensive review of social psychological theory in either social cognition or interpersonal relations. Emphasizes how to assess and employ methodologies that affect explanations, interpretations, and applications of human social cognition and behavior. Laboratory work stresses the inextricable link between theory, methodology, and statistical analyses. Projects relating to one of these two areas closely parallel the process of professional research in social psychology. *Christopher, Hill, Staff.*

## List 2: Natural Science

*Please note that you cannot complete the List 2 requirement by taking only the combination of PSYC 241 plus PSYC 348.

### PSYC 241: Neuroscience I: Brain Structure and Function

(1 Unit)
Prerequisite: PSYC 101, or BIOL 195, or permission of instructor.
An introduction to brain structure and function. Emphasis on the way the nervous system is organized to process information, construct representations of the world and generate adaptive behavior. Lecture, discussion, dissection. Same as NEUR 241. *Jechura, Keyes, Schmitter, Wieth, Wilson.*

### PSYC 243: Sensation & Perception

(1 Unit)
Prerequisite: PSYC 101.
Operation of sensory systems and major principles of perception. Addresses the classical question, "Why do things look as they do?" Not offered every year. *Wieth.*

### PSYC 245: Psychology of Learning

(1 Unit)
Prerequisite: PSYC 101.

A survey of major concepts and issues in conditioning, learning and memory processes. Emphasizes research dealing with the ways learning and memory interact with other variables such as development and species-typical behavior. Lecture and laboratory. Not offered every year. *Wilson.*

### PSYC 247: Drugs, Brain, and Behavior

(1 Unit)
Prerequisite: PSYC 101.
This course is intended as an introduction to the study of drug use, abuse, and addiction, with a focus on recreationally-used drugs. Basic principles of pharmacology and neural transmission will be examined to better understand how drugs influence our brain and behavior. The impact of drug use on society, as well as intervention approaches, will be considered throughout the course. *Wieth, Wilson*

### PSYC 260: Psychology of Language

(1 Unit)
Prerequisite: PSYC 101.
Examines the relationship between the uniquely human cognitive capacity of language and other cognitive processes. Acquisition, comprehension, production, and utilization are studied with particular reference to structure and meaning. Not offered every year. *Staff.*

### PSYC 348: Research in Behavioral Neuroscience

(1 Unit)
Prerequisites: PSYC 306 with a grade of 2.0 or higher and PSYC 241/NEUR 241, or permission of instructor.
Examines the methodology of behavioral neuroscience research. Focuses on a review of the major means by which brain/behavior relations can be determined (i.e., lesion, stimulation, and recording studies) as well as an examination of much that has been learned using these procedures. Laboratory work covers at least two of these procedures in detail: human electrophysiology and a lesion, stimulation, or drug experiment in animals. *Jechura, Wilson.*

### PSYC 378: Research in Cognitive Psychology

(1 Unit)
Prerequisites: PSYC 306 with a grade of 2.0 or higher or permission of instructor.
A review of recent studies of attention, memory, concept formation, problem solving and related areas. Focuses on the ability of humans to select, code, store, organize and retrieve information. Lecture and laboratory. *Wieth.*

## List 3: Applied Science

### PSYC 210: Educational Psychology

(1 Unit)
Prerequisite: PSYC 101 or Education 101.
Educational psychologists develop and apply theories of teaching, learning, and human development to determine the most effective ways for educators to teach students. Ideas about human learning and development impact many teaching activities, including lesson planning, structuring exercises, and diagnosing learning difficulties. Students will discuss how educational psychologists have studied and contributed to educational approaches worldwide including instructional design, educational technology, curriculum development for different content areas, classroom organizational learning, special education and classroom management. This course advances students' understanding of what constitutes typical learning and development, and the mechanisms that influence learning in educational settings across the globe. *Francis.*

## PSYC 304: Psychological Assessment

(1 Unit)
Prerequisite: PSYC 204.
The principles of psychological assessment and the general process of clinical diagnosis. Deals with the construction, evaluation, administration and interpretation of widely-used measuring instruments. Offered in alternate years. *Staff.*

## PSYC 230: Health Psychology

(1 Unit)
Prerequisites: PSYC 101 or permission of instructor.
The role of behavior in the prevention of disease and in the enhancement of health. Looks at behavior in relation to stress, pain, cardiovascular disease, cancer, alcohol abuse, weight control, psychoneuroimmunology. Contrasts biomedical and biopsychosocial approaches to health and disease. *Jechura.*

## PSYC 346: Industrial and Organizational Psychology

(1 Unit)
Prerequisites: PSYC 101 or E&M 101 and PSYC 204 or E&M 200, or permission of instructor.
Focuses on personnel selection, evaluation and employee training and development. Emphasizes criterion development, motivation, job satisfaction, leadership and conflict resolution in industrial and organizational settings. *Christopher, Staff.*

## PSYC 380: Introduction to Counseling

(1 Unit)
Prerequisites: PSYC 101, PSYC 204, PSYC 265, or permission of instructor.
A study of the major theories and current approaches to counseling and psychotherapy. Emphasizes important communication and introspection skills necessary in providing a helping relationship to another person. Opportunity is provided through experiential activities and personal reflection for students to learn and practice some of these basic skills in preparation for a future in counseling or related disciplines. *Staff.*

## PSYC 395: Forensic Psychology

(1 Unit)
Prerequisites: PSYC 204, PSYC 251 and PSYC 265, or permission of instructor.
Explores the psychology of criminal behavior, from causes through prevention or intervention and ending with punishment and rehabilitation. Provides an understanding of the criminal mind, based on knowledge of developmental and abnormal psychology. *Staff.*

## PSYC 398: Practicum

(1/2 Unit)
Prerequisites: Permission of instructor and declared psychology major, human services concentration, or neuroscience concentration, junior or senior standing.
Supervised experience in an applied setting and the opportunity to reflect upon and evaluate this experience in a weekly group meeting. May be repeated once. Offered on a credit/no credit basis. *Keyes.*

## PSYC 399: Practicum

(1 Unit)
Prerequisites: Permission of instructor and declared psychology major, human services concentration, or neuroscience concentration, junior or senior standing.
Supervised experience in an applied setting and the opportunity to reflect upon and evaluate this experience in a weekly group meeting. May be repeated once. Offered on a credit/no credit basis. *Keyes.*

### PSYC 416: Senior Research Seminar

(1 Unit)
Prerequisite: Permission of instructor.
Guides students completing a senior thesis through all aspects of the research process. Focuses on data analysis, interpretation and reporting on the results of student research projects. Considers both theoretical and practical research issues. *Staff.*

### PSYC 389: Selected Topics

(1 Unit)
Prerequisite: PSYC 101 or permission of instructor.
An examination of subjects or areas not included in other courses. May be taken more than once for credit. *Staff.*

## Additional Requirements

- All courses for the major must be taken for a numerical grade, except those offered only on a credit/no credit basis.
- Completion of the department's senior assessment examination and senior exit survey.

# Psychological Science, with Education Concentration, B.A.

## Requirements for Major with Education Concentration

- A minimum of nine units in psychology, as specified in Psychological Science, B.A..
- PSYC 251 counts toward education certification requirements and will not be counted toward the psychology major.
- All courses for the major must be taken for a numerical grade, except those offered only on a credit/no credit basis.
- Completion of Education Concentration

# Religious Studies

# Faculty

**Jocelyn McWhirter**, Stanley S. Kresge Professor of Religious Studies.
B.A., Trinity College; M.A.,Trinity Episcopal School for Ministry; Ph.D., Princeton Theological Seminary. Appointed 2006.

**Ronney B. Mourad**, professor.
B.A., University of North Carolina, Chapel Hill; M.A., University of Chicago; Ph.D., University of Chicago. Appointed 2001.

**Peter M. Valdina**, chair, and associate professor.
B.A., Hamilton College; M.A., Columbia University; M.S.Sc., The New School for Social Research; Ph.D., Emory University. Appointed 2012.

**Daniel L. Wyche**, visiting assistant professor.

B.A., Rutgers University; M.A., University of Chicago; Ph.D., University of Chicago. Appointed 2020.

# Introduction

The study of religion is at the heart of a liberal arts education. Together with the other humanities and the social sciences, the study of religion helps one understand spiritual dimensions of the world and our roles as human beings in it.

**Our Departmental Mission—**Religion has always been an important component in human history. In its many configurations religion has played a critical role in shaping diverse and distinctive forms of culture. Religion has also been shaped by culture. We seek to stimulate in students an appreciation of the spiritual teachings, ethical principles, myths, symbols, and rituals of a variety of societies, believing that in them we encounter legitimate human attempts to envision the sacred and to live in the world as a spiritual arena. Conscious of Albion's heritage as a college related to the United Methodist Church, we give special attention to the monotheistic traditions in the development of our Western culture and intellectual life.

Contemporary society sometimes represents religion only as a set of subjective beliefs. Because of this misrepresentation, people may view themselves or others as fundamentalists or atheists without understanding the variety of spiritual expressions and their roles in society over the course of history. While the study of religion is not required at Albion, we believe that it is central to the liberal arts experience as a means of gaining a broader understanding of the depth of one's own and others' religious beliefs and practices.

Since we are concerned with the academic study of religion, our department does not promote any particular "brand" of theology or spirituality. We subscribe to the assertion made by Friedrich Max Müller who said, "[The one] who knows one [religion], knows none." We encourage our students to explore religion using various modes of analysis including historical-critical, philosophical, and comparative approaches that keep the life of the mind and the life of the soul in creative tension.

The training and interests of our faculty include several areas: biblical languages (Hebrew and Greek); biblical and related ancient Near-Eastern literature; Judaism; classic and contemporary Islamic history; Islamic ritual; comparative religion; myth, symbol, and ritual; philosophy of religion; philosophical theology; ethics and society; and Asian religions. We work closely with interested students in planning and completing directed studies, pursuing internships, preparing individualized research projects resulting in a thesis, and exploring career options.

Religious Studies Department Website

# Career Opportunities

Whether a student chooses to major in religious studies or includes it as part of a double or individually-designed major, that student will be introduced to those aspects of a liberal arts education that aid in the development of insight, flexibility and commitment within a changing world.

Many of our students pursue further studies after Albion, in professional schools, theological seminaries or graduate programs. The religious studies faculty works closely with students who plan to attend seminary in helping them develop an appropriate pre-seminary course of studies, as well as with students who are looking into a career in the human services.

Students entering professional schools after graduation benefit from training in religious studies, since religious beliefs, practices and values influence most major social institutions. Religious studies students pursuing career opportunities in law, medicine or business have the educational background to understand these influences and their implications for professional practice. Theological seminaries prepare persons for a variety of positions, including pastoral ministry, counseling, religious education, youth work, institutional chaplaincies, administration and mission work (home and overseas).

Graduate programs in religious studies lead to M.A., Ph.D., or Th.D. degrees, which are usually associated with teaching careers. There are also dual competency programs that link the study of religion to the study of law, social services, art and/or music, journalism, urban ministries and counseling.

# Special Features

The John and Williemay Cheek Award is a cash award presented each year to the outstanding senior in the department. The Dr. Selva J. Raj Memorial Scholarship in Religious Studies is given to a rising junior or senior religious studies major. Book awards are given to graduating majors.

# Student Learning Outcomes

Upon completion of the Religious Studies major, students will be able to:

1. recall the basic oral traditions, scriptures, doctrines, rituals, and symbols of Hinduism, Buddhism, Judaism, Christianity, and Islam;

2. explain the role of those phenomena in shaping religious belief and practice;

3. explain how those traditions emerge from and shape their historical and cultural contexts;

4. interpret religious phenomena using methodologies--such as theological, textual, comparative, and historical analysis--drawn from different disciplinary approaches to the study of religion;

5. argue persuasively for their interpretations.

Upon completion of the Religious Studies minor, students will be able to:

1. recall the basic historical and cultural contexts of Hinduism, Buddhism, Judaism, Christianity, and Islam;

2. explain the role of historical and cultural context in shaping the beliefs and practices of those religions;

3. interpret religious phenomena using methodologies--such as theological, textual, comparative, and historical analysis--drawn from different disciplinary approaches to the study of religion;

4. argue persuasively for their interpretations.

## Religious Studies Minor

### Requirements for Minor

- All courses for the minor must be taken for a numerical grade. Exceptions to this policy must be approved by the department faculty.

## Minimum of Five Units, Including:

### RS 101: Introduction to Western Religions

(1 Unit)
An introduction to major Western religions as represented by Judaism, Christianity and Islam. Topics include the nature of religion and religious experience in the West; origins and development of each major religion; sacred literature, formative myths, symbols and fundamental tenets; forms of religious expression, spirituality and worship; and the relationship to the world as seen in ethical orientations and institutions. *McWhirter, Mourad.*

### RS 102: Introduction to Eastern Religions

(1 Unit)
An introduction to major Eastern religions as represented by Hinduism, Buddhism, Confucianism, Taoism and Shinto. Topics include the nature of religion and religious experience in the East; origins and development of each major religion; sacred literature, formative myths, symbols and fundamental tenets; forms of religious expression, spirituality and worship; and the relationship to the world as seen in ethical orientations and institutions. *Valdina.*

- Three additional units, two of which must be above the 100-level.

# Religious Studies, B.A.

## Requirements for Major

- A minimum of eight units in religious studies, including RS 101, RS 102, one course in each of the four areas in religious studies at Albion listed below, and at least two other courses in the department. No more than four 100-level courses can be counted for the major.
- All courses for the major must be taken for a numerical grade. Exceptions to this policy must be approved by the department faculty.

## Areas in Religious Studies at Albion

## (1) Biblical and Jewish Studies

## Current Courses in This Area Include:

### RS 121: History, Literature and Religion of the Old Testament

(1 Unit)
A developmental study of the major events, individuals and central religious and ethical ideas of ancient Israel, based on the literature of the Hebrew Bible and relevant data from the archaeology and history of the ancient Near East. *McWhirter.*

### RS 122: History, Literature and Religion of the New Testament

(1 Unit)
The New Testament and other writings of the early Christian period studied as literary, historical and ethical-religious sources for an understanding of Jesus, Paul and the emerging Christian movement. *McWhirter.*

### RS 215: Jewish Life and Thought

(1 Unit)
The world of Jewish life and thought as reflected in both ancient and modern Jewish writings. An analysis of selected biblical, rabbinic and medieval classics, as well as modern Jewish literature. *McWhirter.*

### RS 220: Legend, Wisdom, and Apocalypse

(1 Unit)
Historical and literary analysis of Jewish literature in the Second Temple Period, including the legends of Esther and Judith, the wisdom of Ben Sirach, the apocalyptic visions of Daniel and Enoch, and the Dead Sea Scrolls. Looks at how this body of work constitutes important background for Jewish and Christian origins. *McWhirter.*

### RS 222: Jesus and the Gospels

(1 Unit)
An investigation of five Gospels: the canonical Gospels of Matthew, Mark, Luke and John, along with the Gospel of Thomas. Historical and literary analysis, leading to an evaluation of their usefulness as sources for reconstructing the life and death of Jesus. *McWhirter.*

### RS 320: Gender and Biblical Interpretation

(1 Unit)
Methods of biblical interpretation and their relation to gender construct in society and biblical authority. Offered in alternate years. *McWhirter.*

## (2) Theology and Ethics

Current Courses in This Area Include:

### RS 131: Introduction to Christian Thought

(1 Unit)
Classical themes and modern variations: emotion and reason, world and God, death and self-transcendence, guilt and forgiveness, meaninglessness and the sense of the holy. *Mourad.*

### RS 232: Faith and Reason

(1 Unit)
Explores epistemology, or the theory of knowledge, as it applies to religious belief. Focuses on the nature of faith and asks whether faith is irrational according to thinkers such as Blaise Pascal, John Locke, Karl Marx and Sigmund Freud. *Mourad.*

### RS 234: Philosophy of Religion

(1 Unit)
Philosophical examination of several classic religious problems, including the nature of God, the proofs of God's existence, the justification for evil and suffering, the rationality of belief in miracles and the nature of the afterlife. Offered occasionally. Same as PHIL 234. *Mourad.*

### RS 242: Christian Ethics

(1 Unit)
An introduction to the foundations and applications of Christian theological ethics. Investigates Christian perspectives on moral issues such as sex and marriage, medical ethics and social justice. *Mourad.*

### RS 250: Mysticism and Ecstasy

(1 Unit)
A study of mystical and ecstatic experiences focused primarily on the Christian tradition. Includes discussion of the limits and puzzles of mystical language and the value of religious experiences as evidence. Are mystics reasonable if they base their beliefs on religious experiences? Do their experiences provide any support for other people's religious beliefs? Offered occasionally. *Mourad.*

### RS 270: Liberation Theology

(1 Unit)
Examines Christian theological responses to poverty and social injustice emphasizing the theme of liberation. Includes analysis of liberation theology in 1960s Latin America and its influence on African American and feminist theologies in the U.S. Offered occasionally. *Mourad.*

### RS 330: American Christianities

(1 Unit)
This course explores the history of Christian movements in the United States. We will focus on historical and contemporary segregation in black and white American Christian denominations as well as various theological reponses to racial division and racism. *Ronney Mourad*

## (3) Asian and Comparative Religions

## Current Courses in This Area Include:

### RS 211: Hinduism

(1 Unit)
Indian philosophical world views, ritual expressions and moral orientations: Vedas, Upanishads, Bhagavad Gita, Vedanta. Offered occasionally. *Valdina.*

### RS 212: Buddhism

(1 Unit)
Spring Indian, Chinese and Japanese philosophical world views, ritual expressions and moral orientations. Theravada, Mahayana, Ch'an, Zen. Offered occasionally. *Valdina.*

### RS 251: Yogis and Ascetics

(1 Unit)
What does it mean to want to renounce the world? When do the conditions of society cause us to want to transcend everyday life in a radical way? Explores the historical development of concepts of yoga and renunciation in South Asia as they extend into Hindu, Jain and Buddhist practices. Themes include the relation between dissent and social responsibility, the difference between negation and affirmation, and the roles of wandering and control of the body in ascetic practices. *Valdina*.

### RS 261: Death and Dying

(1 Unit)
Human longing for a meaningful explanation of the mystery of death and dying is deep and universal. This comparative course examines a wide array of beliefs and rituals related to death and dying in a select number of world religions. In addition to gaining intellectual familiarity with cross-cultural beliefs and practices, students will be encouraged to analyze familiar religious and cultural practices surrounding death and dying. *Valdina.*

## (4) Islamic Religion

### Current Courses in This Area Include:

### RS 104: Introduction to Islam

(1 Unit)
An introduction to the beliefs and practices of Islam in its various manifestations, with additional emphasis on the history, politics and gender issues that have both influenced and been influenced by Islam. Analyzes the information, and misinformation, on Islam as presented in the news media and on the Internet. *Valdina.*

### RS 204: Islam and the Modern World

(1 Unit)
An examination of ideas and movements related to Islam's interaction with the West in the modern period, including Muslim intellectual responses to issues like colonialism, modernism, secularism, nationalism, democracy, science and women's rights. Also includes political developments in certain Islamic countries. *Valdina.*

### RS 205: Islamic Mysticism

(1 Unit)
An introduction to Islamic mysticism. Looks at the historical development of Sufism, its contributions to Islamic civilization and to the spread of Islam, its literature, key themes such as love and drunkenness, distinctive practices including music and dance, and the ways it has adapted to the modern world, including in the West. *Valdina.*

### RS 206: Women, Gender, Islam

(1 Unit)
Examines the role of gender, and the construction of gender, in the history of Islam. Begins with the historical roots of the topic and examines presentations of gender in the Qur'an and the early sources of Islam. Explores case studies in the contemporary world, including the contexts in Pakistan, India and Bangladesh. *Valdina.*

# The Philadelphia Center

## EXPERIENTIAL EDUCATION AT ITS FINEST

The Philadelphia Center off-campus study program offers you the opportunity to gain college credit while living and learning independently. With our help, you will secure a professional, accredited internship and housing in the vibrant and diverse city of Philadelphia. You will explore career paths through real-world applications and rigorous, seminar-style courses. Upon completion of the program, you will leave Philadelphia with a strong sense of your abilities, social and professional aspirations, and a plan for your future.

# Theatre

# Faculty

**Zach Fischer**, chair and assistant professor.
B.A., Willamette University; M.F.A., Florida State University/Asolo Conservatory for Actor Traning. Appointed 2016.

**Stephanie Henderson**, visiting assistant professor.
B.S., Moravian College; M.F.A., Michigan State University. Appointed 2017.

**Mark E. Hoffland**, staff lecturer.
B.A., Augsburg College; M.F.A., Michigan State University. Appointed 2007.

**Kiah Kayser**, assistant professor.
B.A., Iowa State University; M.F.A., University of Arkansas. Appointed 2021.

**Joel Klain**, technical director.
B.A., Central Michigan University; Appointed 2017.

# Introduction

The Department of Theatre provides a rigorous classroom experience, balanced with an ambitious production season dedicated to professional values and practices. We revere the unique, cross-disciplinary power of the theatre art form to explore the human condition, chronicle history, promote inclusivity, and contribute to salient conversations on campus and in our community. Our curriculum emphasizes intensive study of literature, culture, design, performance, and technology, while also demanding dynamic practical application. Our students refine analytical and research abilities as they simultaneously strengthen their imaginative and creative aptitude. From the lecture classroom and practice studio, to the construction shop and performance main-stage, we foster disciplined theatre artists and informed audience members for the twenty-first century.

Theatre Department Website

# Career Opportunities

Graduates of the department may pursue careers in theatre performance, production design, stage management, arts management, teaching at all levels, arts criticism, and arts advocacy. Many of our majors continue on to graduate studies in the specialized fields of performance, directing, design, theatre history, stage manangement, playwrighting, and criticism.

# Student Learning Outcomes

Students who complete a **major** in Theatre will be able to:

-Apply acting and communication skills to effectively present, and/or perform in a public forum.

-Demonstrate knowledge of theatre history, including identifying essential plays, theatre aritsts, and styles of production.

-Think critically and analytically about a dramatic text.

-Integrate artistic feedback and criticism in the manner required of a collaborative artist.

-Create an original design, text, and/or performance piece.

-Apply a professional work ethic and discipline to the creative process.

Students who complete a **minor** in Theatre will be able to:

-Apply acting and communication skills to effectively present, and/or perform in a public forum.

-Demonstrate knowledge of theatre history, including identifying essential plays, theatre aritsts, and styles of production.

-Think critically and analytically about a dramatic text.

-Integrate artistic feedback and criticism in the manner required of a collaborative artist.

# Theatre Minor

## Requirements for Minor in Theatre

## Six Units in Theatre, Including:

### THEA 111: Theatre Arts

(1 Unit)
A study of the nature and foundation of theatre as a unique art form. The course explores the elements which make up dramatic production, the theatre's historical development and how the theatre relates to contemporary life Not recommended for theatre majors and minors. *Staff.*

**OR**

### THEA 209: Dramatic Analysis

(1 Unit)
An introduction to dramatic and theatrical analysis, focusing on how a theatre text works both on the page and on the stage. Students discover "how a play means" by exploring different theoretical approaches and dramatic traditions and performing both dramatic and theatrical analyses. *Staff.*

## THEA 211: Stagecraft and Theatrical Technology

(1 Unit)
Prerequisites: THEA 111, THEA 209 or permission of instructor.
This course will provide an introduction to, and give students practical working knowledge of, the technical skills used in theatre. Specially, scenic construction, painting, lighting, and sound technology. *Klain.*

## THEA 251: Acting I

(1 Unit)
An introduction to the essential methods and techniques of acting. The semester will be comprised of a progression of exercises and projects intended to expand mental, emotional, and physical awareness, culminating in script analysis and scene work from full-length plays. No previous experience is required. *Fischer*

## THEA 280: Theatre History 1: BC - 1700

(1 Unit)
An examination of the major periods of theatre history, theatre architecture and conventions, and dramatic literature of oral and ancient cultures through the theatres of Absolutism. Offered alternate semesters with THEA 281. Offered periodically. *Staff.*

## THEA 281: Theatre History 2: 1700 - Present

(1 Unit)
An examination of the major periods of theatre history, theatre architecture and conventions, and dramatic literature of oral and ancient cultures through the theatres of Absolutism. Offered alternate semesters with THEA 280. Offered periodically. *Staff.*

# One Elective Chosen From:

## THEA 210: Women in the American Theatre

(1 Unit)
An examination of the contributions of women in all aspects of the American Theatre; a study of the images of women as portrayed in American drama; an introduction to feminist theory and criticism as it relates to theatre and drama. *Staff.*

## THEA 220: Costume and Prop Craft

(1 Unit)
An introduction to aspects of costume and theatrical property design and artisanship including professional presentation skills, basic sewing, millinery (hat making), apparel and textiles terminology, painting and dying science, leatherwork, wig styling, and armor work. Includes costume lab work and hands-on design and construction projects. *Staff.*

- THEA 225

  Four 1/4-unit practica

## THEA 175: Theatre

(1/4 Unit)
Prerequisite: Permission of instructor.
Acting, direction, assistant direction, production design. *Staff.*

### THEA 176: Theatre

(1/2 Unit)
Prerequisite: Permission of instructor.
Acting, direction, assistant direction, production design. *Staff.*

## Note

- All courses for the minor must be taken for a numerical grade.
- Theatre minors will be required to make significant contributions to any two shows of the academic year. Acceptable participation includes: Being a member of the cast, design team, run crew, stage management, and costume or set construction teams. Any paid labor does not count towards participation. In the event that a student is unable to participate in any of the aforementioned capacities, a significant contribution will be prescribed by the faculty.

# Theatre, B.A.

## Requirements for Major in Theatre

## A Minimum of 10 Units in Theatre, Including:

### THEA 209: Dramatic Analysis

(1 Unit)
An introduction to dramatic and theatrical analysis, focusing on how a theatre text works both on the page and on the stage. Students discover "how a play means" by exploring different theoretical approaches and dramatic traditions and performing both dramatic and theatrical analyses. *Staff.*

### THEA 211: Stagecraft and Theatrical Technology

(1 Unit)
Prerequisites: THEA 111, THEA 209 or permission of instructor.
This course will provide an introduction to, and give students practical working knowledge of, the technical skills used in theatre. Specially, scenic construction, painting, lighting, and sound technology. *Klain.*

### THEA 251: Acting I

(1 Unit)
An introduction to the essential methods and techniques of acting. The semester will be comprised of a progression of exercises and projects intended to expand mental, emotional, and physical awareness, culminating in script analysis and scene work from full-length plays. No previous experience is required. *Fischer*

### THEA 280: Theatre History 1: BC - 1700

(1 Unit)
An examination of the major periods of theatre history, theatre architecture and conventions, and dramatic literature of oral and ancient cultures through the theatres of Absolutism. Offered alternate semesters with THEA 281. Offered periodically. *Staff.*

### THEA 281: Theatre History 2: 1700 - Present

(1 Unit)
An examination of the major periods of theatre history, theatre architecture and conventions, and dramatic literature of oral and ancient cultures through the theatres of Absolutism. Offered alternate semesters with THEA 280. Offered periodically. *Staff.*

**AND EITHER**

### THEA 350: Directing for the Stage

(1 Unit)
Prerequisites: THEA 209, THEA 211, and THEA 251, or permission of instructor.
This course explores the function and responsibilities of the director in a stage production. Class time will be divided between round-table discussion and hands-on staging of numerous scenes from published plays, students will find their own voice and practice as directors. *Fischer*

## And Four Units of Electives Chosen From:

### THEA 210: Women in the American Theatre

(1 Unit)
An examination of the contributions of women in all aspects of the American Theatre; a study of the images of women as portrayed in American drama; an introduction to feminist theory and criticism as it relates to theatre and drama. *Staff.*

### THEA 220: Costume and Prop Craft

(1 Unit)
An introduction to aspects of costume and theatrical property design and artisanship including professional presentation skills, basic sewing, millinery (hat making), apparel and textiles terminology, painting and dying science, leatherwork, wig styling, and armor work. Includes costume lab work and hands-on design and construction projects. *Staff.*

## A Total of Two Cognate Courses Must Be Completed for a Major in Theatre:

## One Course in English:

### ENGL 375: Shakespeare I

(1 Unit)
Prerequisite: Sophomore standing or higher or permission of instructor.
A study of Shakespeare's plays before 1600, including at least two tragedies, five comedies, and four history plays. The plays are examined individually as particular theatrical events in their own context and in subsequent ages, and conditions of production in Shakespeare's theater are considered. Major attention is given to the representation of

gender in the plays, and other topics include the history of critical response, the variety of theoretical approaches currently available, and the many political and social agendas which the plays may have been made to serve. *MacInnes.*

### One Course in Music or Art:

#### ARTH 116: World Art

(1 Unit)
An introduction to world art in its historical context, considering the dominant arts of each continent framed within historical, religious, political, economic and social events. Incorporates basic tools of art historical analysis and criticism. *Wickre, Staff.*

#### MUS 111: Music Appreciation

(1 Unit)
Designed for the non-music major who wishes to gain an appreciation of music as a fine art. The musical elements of style, form and design are investigated primarily through listening. Not open to music majors. *Staff.*

### Additional Requirements

- All courses for the major must be taken for a numerical grade.
- Theatre majors will be required to make a significant contribution to all four shows of the academic year. Acceptable participation includes: Being a member of the cast, design team, stage management, run crew, costume or set construction teams, paint crew, or ushering staff. Any paid labor does not count towards participation. In the event that a student is unable to participate in any of the aforementioned capacities, an appropriate "significant contribution" will be prescribed by the faculty.
- Theatre majors will complete a senior capstone project, which will consist of a major creative contribution to a departmental production in the student's area of emphasis. An accompanying written narrative will document the entire creative process of the project and serve as the student's culminating statement on their course of study in the department.

# Women's, Gender, and Sexuality Studies

# Faculty

**Scott A. Melzer**, chair and professor.
B.A., University of Florida; M.A., Ph.D., University of California, Riverside. Appointed 2004.

**Trisha Franzen**, professor of women's and gender studies.
B.A., State University of New York, Buffalo; M.A., Ph.D., University of New Mexico. Appointed 2003.

**Lucia Soriano**, visiting assistant professor of ethnic studies and women's and gender studies.
B.A., California Polytechnic University; M.A., Claremont Graduate University; Ph.D., Washington State University. Appointed 2021.

# Introduction

Women's, gender, and sexuality studies is an interdisciplinary program that examines the role of gender in the construction of lives, cultures, community norms, meaning systems, and systems of representation. All of the areas of study within the program use cross-cultural or multicultural investigations to understand the dynamics and differences in the operation of gender. Within specific contexts but also across differences, the program also focuses on the lives of women--on women's past and present active involvement in the making of the world. Each of the areas of study emphasizes the ongoing interplay of theory and practice.

The program includes minors in gender studies, women's studies, and sexuality studies (see below).

Program Website: http://albion.edu/academics/departments/womens-and-gender-studies

# Student Learning Outcomes

**Student Learning Outcomes Women's Studies Major**

1. Students will be able to recognize theories and key scholarship in women's studies.
2. Students will be able to identify women's issues in the context of global diversity.
3. Students will be able to analyze the critical perspectives brought to a discipline by women's studies.
4. Students will be able to use feminist theory to evaluate representations of women.
5. Students will be able to interpret feminist perspectives on specific and detailed historical contexts.
6. Students will be able to assess knowledge far from their own intersectional subject positions.

**Student Learning Outcomes Gender Studies Major**

1. Students will be able to recognize theories and key scholarship in gender studies.
2. Students will be able to analyze gender issues in the context of global diversity.
3. Students will be able to evaluate the critical perspectives brought to a discipline by gender studies.
4. Students will be able to critically examine the role of gender and sexuality in representations.
5. Students will be able to interpret studies of gender and sexuality in specific and detailed historical contexts.
6. Students wlll be able to analyze the systemic nature of gender and sexuality.

**Students Learning Outcomes Women's Studies Minor**

1. Students will be able to recognize theories and key scholarship in womens's studies.
2. Students will be able to use feminist theory to evaluate representations of women.
3. Students will be able to interpret feminist perspectives on specific and detailed historical contexts.

**Student Learning Outcomes Gender Studies Minor**

1. Students will be able to recognize theories and key scholarship in gender studies.
2. Students will be able to critically examine the role of gender in representations.
3. Students will be able to evaluate the critical perspectives brought to a discipline by gender studies.

**Student Learning Outcomes Sexuality Studies Minor**

1. Students will be able to recognize theories and key scholarship on sexuality.
2. Students will be able to interpret studies of sexuality in specific and detailed historical contexts.
3. Students will be able to use feminist theory to critically examine conceptions of sexuality.

# Gender Studies Minor

## Requirements for Minor in Gender Studies

## Five Units, Including:

## WGS 111: Introduction to Women, Gender and Sexuality

(1 Unit)
The goal of this interdisciplinary course is to introduce students to the fields of women's, gender, and sexuality studies. Students will learn core concepts and historical and current theories that analyze women's positions, gender realities and sexual identities and cultures. This course also has a particular focus on social construction of differences and how these central issues interact with race, class, ethnicity, culture, age and abilities. Each semester students will explore four topics in depth: intersectional identities, violence, public policy and economics/work. They will also apply WGS analyses to current events and the media. *Staff*

## One From:

- ANTH/SOC 332

## SOC 333: The Sociology of Sex and Gender

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or WGS 111, or permission of instructor.
Examines the social construction and social consequences of gender difference and gender inequality with a specific focus on the United States. Gender theory and research will be used to explore masculinity and femininity as identities, as behavioral expectations and as organizing features of social life. Covers belief systems; broad social institutions such as family, employment, media and health; experiences of sexuality and violence; and individual behavior such as personal styles and modes of interacting with others. Focuses on how gender as an organizing feature of social life benefits some and is disadvantageous to others, paying special attention to how race, ethnicity, class and sexuality intersect with gender. Gender theory and research will be used to explore masculinity and femininity as identities, as behavioral expectations and as organizing features of social life. *Melzer.*

## WGS 360: Feminist Theory

(1 Unit)
Prerequisite: WGS 106 or WGS 116 or permission of instructor.
Explores twentieth-century feminist thought from the United States and Great Britain with some attention to other influences. Grounds feminist theory within the grassroots women's movement, a social, cultural and political movement for change. Tracing the influence of feminism in the academy, the course surveys not only the critical and analytical foundations of the field of women's studies but also the impact of women and gender-centered scholarship on the traditional disciplines. The challenges to feminist theory raised by U.S. women of color, working-class women, lesbians and other women who have experienced multiple oppressions are explored along with the women's examinations of the intersections of sexism and racism, classism, homophobia and other systems of power. *Staff*

## Three Additional Courses From the Electives Listed Below:

At least two of which must be at the 300 level or higher.

## SOC 230: Men and Masculinities

(1 Unit)
Prerequisite: SOC 101, or Women's and Gender Studies 111, or permission of instructor.
Examines how people are transformed into boys/men who interact in the social world through shared gendered meanings. Analyzes various socio-historical constructions of masculinity both in the United States and beyond, paying particular attention to how these differ over time, across cultures and within subcultures. Focuses on gender as a central

organizing principle of society, and how this socially constructed characteristic affects individuals, society and, quite literally, the world. Discusses structural inequalities, cultural similarities and differences, intersectionality, and individual issues related to masculinities. (This is an Inside-Out Prison Exchange Program course, whereby Albion College students travel to a local correctional facility to join incarcerated students for a semester long seminar.) *Melzer*.

- ANTH/SOC 332

## SOC 333: The Sociology of Sex and Gender

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or WGS 111, or permission of instructor.
Examines the social construction and social consequences of gender difference and gender inequality with a specific focus on the United States. Gender theory and research will be used to explore masculinity and femininity as identities, as behavioral expectations and as organizing features of social life. Covers belief systems; broad social institutions such as family, employment, media and health; experiences of sexuality and violence; and individual behavior such as personal styles and modes of interacting with others. Focuses on how gender as an organizing feature of social life benefits some and is disadvantageous to others, paying special attention to how race, ethnicity, class and sexuality intersect with gender. Gender theory and research will be used to explore masculinity and femininity as identities, as behavioral expectations and as organizing features of social life. *Melzer.*

## SOC 360: Intimate Violence

(1 Unit)
Prerequisites: SOC 101 or WGS 111 and junior standing or permission of instructor.
Examines violence between intimates, primarily (but not solely) within the United States, covering a range of interpersonal relationships (children, parents, spouses, partners, acquaintances, siblings, etc.) as well as various forms of abuse (emotional, physical, neglect, sexual assault/rape, etc.) Traces intimate violence socio-historically, including theoretical, methodological, empirical and applied issues and debates within the field. Analyzes the incidence and prevalence of intimate violence, and, in the process, attempts to identify causes and solutions. Focuses on the importance of structural gender inequality in shaping individuals' violent behavior and the degree to which gender inequality influences various forms of violence. *Melzer.*

## BIOL 368: Behavioral Ecology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
Patterns and functions of behavior examined from an ecological-evolutionary perspective. Topics include history of animal behavior, behavioral genetics, habitat selection, foraging, antipredator behavior, cooperation and altruism, communication, sexual selection, mating systems, parental behavior and optimality models. Independent field studies of living animals. Lecture and laboratory. Offered in alternate years. *Staff.*

## ENGL 251: Contemporary Literature

(1 Unit)
Prerequisite: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
A study of British and American writers whose major work has been done since 1945. *Staff*

## RS 320: Gender and Biblical Interpretation

(1 Unit)
Methods of biblical interpretation and their relation to gender construct in society and biblical authority. Offered in alternate years. *McWhirter*.

## Elective Courses

Elective courses should be selected in consultation with a women's and gender studies faculty member and reported to the Women's, Gender, and Sexuality Studies Program chair.

# Sexuality Studies Minor

## Requirements for Minor in Sexuality Studies

## Five Units, Including:

### WGS 111: Introduction to Women, Gender and Sexuality

(1 Unit)
The goal of this interdisciplinary course is to introduce students to the fields of women's, gender, and sexuality studies. Students will learn core concepts and historical and current theories that analyze women's positions, gender realities and sexual identities and cultures. This course also has a particular focus on social construction of differences and how these central issues interact with race, class, ethnicity, culture, age and abilities. Each semester students will explore four topics in depth: intersectional identities, violence, public policy and economics/work. They will also apply WGS analyses to current events and the media. *Staff*

### WGS 360: Feminist Theory

(1 Unit)
Prerequisite: WGS 106 or WGS 116 or permission of instructor.
Explores twentieth-century feminist thought from the United States and Great Britain with some attention to other influences. Grounds feminist theory within the grassroots women's movement, a social, cultural and political movement for change. Tracing the influence of feminism in the academy, the course surveys not only the critical and analytical foundations of the field of women's studies but also the impact of women and gender-centered scholarship on the traditional disciplines. The challenges to feminist theory raised by U.S. women of color, working-class women, lesbians and other women who have experienced multiple oppressions are explored along with the women's examinations of the intersections of sexism and racism, classism, homophobia and other systems of power. *Staff*

## Two of the Following:

### WGS 240: Sexualities, Histories and Culture

(1 Unit)
Examines how sexuality has emerged as the basis for academic inquiry and numerous identities in the late twentieth century. Part I examines the historical research on sexuality across various cultures, considering what changes, from economic through technological, have fostered the development of sexuality-related laws, restrictions, identities and opportunities. Part II traces the theories about contemporary identities that emerged from women's and gender studies research, assessing medical, academic, religious and legal institutions as well as the grassroots resistance and alternative naming presented by individuals and communities. In Part III, students in each class have the opportunity to determine some of the topics covered. *Staff*

## One of the Following Electives:

### HIST 340: History of Women in the U.S., 1877-Present

(1 Unit)
Prerequisite: Previous course work in women's studies or history.
Does some shared history link American Indian girls sent to BIA boarding schools at the turn of the century with the immigrant girls who labored for the Triangle Shirtwaist Factory? How is "women's" history different? What difference does women's history make to U.S. history? This course considers such questions by examining the situations of women in the U.S. from 1877 forward. It introduces students to the theories and methods of women's history that scholars have developed over the last quarter century. Central to this course is the recognition that women's experiences are not simple parallels to men's, and involve differences among women such as those based on sexuality, class, race and regional factors. *Franzen.*

- PSYC 351: Developmental Psychology

## Elective Courses

Elective courses should be selected in consultation with a women's, gender, and sexuality studies faculty member and reported to the Women's, Gender, and Sexuality Studies Program chair.

# Women's Studies Minor

## Requirements for Minor in Women's Studies

## Five Units, Including:

### WGS 111: Introduction to Women, Gender and Sexuality

(1 Unit)
The goal of this interdisciplinary course is to introduce students to the fields of women's, gender, and sexuality studies. Students will learn core concepts and historical and current theories that analyze women's positions, gender realities and sexual identities and cultures. This course also has a particular focus on social construction of differences and how these central issues interact with race, class, ethnicity, culture, age and abilities. Each semester students will explore four topics in depth: intersectional identities, violence, public policy and economics/work. They will also apply WGS analyses to current events and the media. *Staff*

### WGS 360: Feminist Theory

(1 Unit)
Prerequisite: WGS 106 or WGS 116 or permission of instructor.
Explores twentieth-century feminist thought from the United States and Great Britain with some attention to other influences. Grounds feminist theory within the grassroots women's movement, a social, cultural and political movement for change. Tracing the influence of feminism in the academy, the course surveys not only the critical and analytical foundations of the field of women's studies but also the impact of women and gender-centered scholarship on the traditional disciplines. The challenges to feminist theory raised by U.S. women of color, working-class women, lesbians and other women who have experienced multiple oppressions are explored along with the women's examinations of the intersections of sexism and racism, classism, homophobia and other systems of power. *Staff*

- One historical overview course

## Two Others From the Electives Listed Below:

At least one of which must be at the 300 level or higher

### ARTH 219: Impressionism: Précis to Prologue

(1 Unit)
Critically examines paintings of the Impressionists in France in the context of historical documents from the period, contemporary critical writings about the artists and paintings, and the art historical texts generated about the art. A study of Impressionism's roots in French romanticism and realism introduces the course. Special attention is paid to the particular historical circumstances that gave rise to Impressionism as a movement, and to the gendered nature of both the production and reception of Impressionist paintings. *Wickre.*

### ARTH 310: Women and Art

(1 Unit)
Examines the roles women have played as creators, subjects, patrons and critics of art through history. Special emphasis will be placed on theories of the social construction of gender through art in all periods and on responses of contemporary women artists to such constructions. *Wickre.*

### FREN 320: French Women Writers and Feminist Criticism

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent.
Analysis of works by French women writers from the Middle Ages to the present, as well as works of feminist critical theory. Conducted in French. Offered every three years. *Guenin-Lelle.*

### HIST 340: History of Women in the U.S., 1877-Present

(1 Unit)
Prerequisite: Previous course work in women's studies or history.
Does some shared history link American Indian girls sent to BIA boarding schools at the turn of the century with the immigrant girls who labored for the Triangle Shirtwaist Factory? How is "women's" history different? What difference does women's history make to U.S. history? This course considers such questions by examining the situations of women in the U.S. from 1877 forward. It introduces students to the theories and methods of women's history that scholars have developed over the last quarter century. Central to this course is the recognition that women's experiences are not simple parallels to men's, and involve differences among women such as those based on sexuality, class, race and regional factors. *Franzen.*

- HIST 370

### SCI 205: Women and Ethnic Minorities in Science

(1 Unit)
Prerequisite: One 100-level science course.
An examination of both the history of women and other traditionally excluded persons in science, and the way science has looked at them. The course considers such questions as: Why are there so few members of these groups in science? What contributions have these scientists made? Would science be different if more members of these groups were scientists? *Staff.*

### THEA 210: Women in the American Theatre

(1 Unit)
An examination of the contributions of women in all aspects of the American Theatre; a study of the images of women as portrayed in American drama; an introduction to feminist theory and criticism as it relates to theatre and drama. *Staff.*

## Elective Courses

Elective courses should be selected in consultation with a women's, gender, and sexuality studies faculty member and reported to the Women's, Gender, and Sexuality Studies Program chair.

# Women's, Gender, and Sexuality Studies, Gender Studies Emphasis, B.A.

## Requirements for Major

Eight units as well as a senior capstone experience (one-half or one unit). The requirements for each track are described below.

## Women Studies Emphasis Required Courses:

### WGS 111: Introduction to Women, Gender and Sexuality

(1 Unit)
The goal of this interdisciplinary course is to introduce students to the fields of women's, gender, and sexuality studies. Students will learn core concepts and historical and current theories that analyze women's positions, gender realities and sexual identities and cultures. This course also has a particular focus on social construction of differences and how these central issues interact with race, class, ethnicity, culture, age and abilities. Each semester students will explore four topics in depth: intersectional identities, violence, public policy and economics/work. They will also apply WGS analyses to current events and the media. *Staff*

### WGS 360: Feminist Theory

(1 Unit)
Prerequisite: WGS 106 or WGS 116 or permission of instructor.
Explores twentieth-century feminist thought from the United States and Great Britain with some attention to other influences. Grounds feminist theory within the grassroots women's movement, a social, cultural and political movement for change. Tracing the influence of feminism in the academy, the course surveys not only the critical and analytical foundations of the field of women's studies but also the impact of women and gender-centered scholarship on the traditional disciplines. The challenges to feminist theory raised by U.S. women of color, working-class women, lesbians and other women who have experienced multiple oppressions are explored along with the women's examinations of the intersections of sexism and racism, classism, homophobia and other systems of power. *Staff*

- Capstone Experience: directed study, honors thesis, practicum, or internship

## Gender Studies Emphasis Required Courses:

### WGS 111: Introduction to Women, Gender and Sexuality

(1 Unit)
The goal of this interdisciplinary course is to introduce students to the fields of women's, gender, and sexuality studies. Students will learn core concepts and historical and current theories that analyze women's positions, gender realities and sexual identities and cultures. This course also has a particular focus on social construction of differences and how these central issues interact with race, class, ethnicity, culture, age and abilities. Each semester students will explore four topics in depth: intersectional identities, violence, public policy and economics/work. They will also apply WGS analyses to current events and the media. *Staff*

### WGS 360: Feminist Theory

(1 Unit)
Prerequisite: WGS 106 or WGS 116 or permission of instructor.
Explores twentieth-century feminist thought from the United States and Great Britain with some attention to other influences. Grounds feminist theory within the grassroots women's movement, a social, cultural and political movement for change. Tracing the influence of feminism in the academy, the course surveys not only the critical and analytical foundations of the field of women's studies but also the impact of women and gender-centered scholarship on the traditional disciplines. The challenges to feminist theory raised by U.S. women of color, working-class women, lesbians and other women who have experienced multiple oppressions are explored along with the women's examinations of the intersections of sexism and racism, classism, homophobia and other systems of power. *Staff*

**OR**

### SOC 333: The Sociology of Sex and Gender

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or WGS 111, or permission of instructor.
Examines the social construction and social consequences of gender difference and gender inequality with a specific focus on the United States. Gender theory and research will be used to explore masculinity and femininity as identities, as behavioral expectations and as organizing features of social life. Covers belief systems; broad social institutions such as family, employment, media and health; experiences of sexuality and violence; and individual behavior such as personal styles and modes of interacting with others. Focuses on how gender as an organizing feature of social life benefits some and is disadvantageous to others, paying special attention to how race, ethnicity, class and sexuality intersect with gender. Gender theory and research will be used to explore masculinity and femininity as identities, as behavioral expectations and as organizing features of social life. *Melzer.*

- Capstone Experience: directed study, Honors thesis, practicum, or internship

## Note

A senior exit interview will be used for assessment purposes.

**Six different courses, at least one from each of the following lists. The six courses must be selected in consultation with the program director or the faculty member in the program.**

## Institutions or Knowledge Systems

This requirement emphasizes the study of the systemic nature of gender or of the critical perspectives brought to a discipline by feminist theory or gender theory.

### SOC 333: The Sociology of Sex and Gender

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or WGS 111, or permission of instructor.

Examines the social construction and social consequences of gender difference and gender inequality with a specific focus on the United States. Gender theory and research will be used to explore masculinity and femininity as identities, as behavioral expectations and as organizing features of social life. Covers belief systems; broad social institutions such as family, employment, media and health; experiences of sexuality and violence; and individual behavior such as personal styles and modes of interacting with others. Focuses on how gender as an organizing feature of social life benefits some and is disadvantageous to others, paying special attention to how race, ethnicity, class and sexuality intersect with gender. Gender theory and research will be used to explore masculinity and femininity as identities, as behavioral expectations and as organizing features of social life. *Melzer.*

## SOC 360: Intimate Violence

(1 Unit)
Prerequisites: SOC 101 or WGS 111 and junior standing or permission of instructor.
Examines violence between intimates, primarily (but not solely) within the United States, covering a range of interpersonal relationships (children, parents, spouses, partners, acquaintances, siblings, etc.) as well as various forms of abuse (emotional, physical, neglect, sexual assault/rape, etc.) Traces intimate violence socio-historically, including theoretical, methodological, empirical and applied issues and debates within the field. Analyzes the incidence and prevalence of intimate violence, and, in the process, attempts to identify causes and solutions. Focuses on the importance of structural gender inequality in shaping individuals' violent behavior and the degree to which gender inequality influences various forms of violence. *Melzer.*

## BIOL 368: Behavioral Ecology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
Patterns and functions of behavior examined from an ecological-evolutionary perspective. Topics include history of animal behavior, behavioral genetics, habitat selection, foraging, antipredator behavior, cooperation and altruism, communication, sexual selection, mating systems, parental behavior and optimality models. Independent field studies of living animals. Lecture and laboratory. Offered in alternate years. *Staff.*

- BIOL 368L: Behavioral Ecology Staff

## COMM 207: Communicating Gender

(1 Unit)
An exploration of the ways in which gender and communication interact. Students are introduced to research in the field and observe and analyze the ways in which our cultural construction of gender impacts on how we communicate and judge the communication of others. *Erlandson, Staff.*

## RS 320: Gender and Biblical Interpretation

(1 Unit)
Methods of biblical interpretation and their relation to gender construct in society and biblical authority. Offered in alternate years. *McWhirter.*

## SCI 205: Women and Ethnic Minorities in Science

(1 Unit)
Prerequisite: One 100-level science course.
An examination of both the history of women and other traditionally excluded persons in science, and the way science has looked at them. The course considers such questions as: Why are there so few members of these groups in science?

What contributions have these scientists made? Would science be different if more members of these groups were scientists? *Staff.*

### WGS 250: Gender and the Global Garden

Which environmentalists have won the Nobel Peace Prize? Who are the writers and scholars shaping our analyses of our food systems? Who are the global farmers? Where do gender and other identity issues fit into our responses to these questions? This class is situated at the junction of gender, environmental and food studies. Using interdisciplinary and intersectional approaches, this course examines how gender shapes our views of the environment, agriculture and food. We consider the leaders, scholars, innovators, and activists of these movements; what brought them to their commitments; and how their identities might have shaped their interests, activities and goals. The course asks how we come to see and hear certain individuals and groups while others remain hidden and how these issues of visibility and invisibility influence public opinions and public activism. We will take our own gender analysis skills into our local garden, farm and food systems. We will study relevant Michigan programs and work with the Wildcat Garden. *Staff*

## Representations

This requirement emphasizes feminist approaches or gender study approaches to the examination of gender in representations; this requirement also can involve the recovery and examination of representations that previously had been invisible due to gender bias.

### ARTH 310: Women and Art

(1 Unit)
Examines the roles women have played as creators, subjects, patrons and critics of art through history. Special emphasis will be placed on theories of the social construction of gender through art in all periods and on responses of contemporary women artists to such constructions. *Wickre.*

### ENGL 251: Contemporary Literature

(1 Unit)
Prerequisite: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
A study of British and American writers whose major work has been done since 1945. *Staff*

## Global Perspectives

This requirement emphasizes the importance of gaining knowledge far from one's own subject position. For this unit, students must choose a course outside their own cultural and geographical experience.

## For U.S. Students, Some Options:

### HIST 301: Gender in Latin American History

(1 Unit)
Prerequisite:  Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
how have conquest, race mixture, nation-building, consumer culture, and immigration impacted Latin American women and men?  This seminar examines the lives of indigenous peasents, African slaves, Spanish nuns and priests, sorceresses, movie stars, and mothers and fathers throughout the Americas. *Staff*

### HIST 365: Women in the Global South

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
The course examines women and womanhood in a cross-cultural context, paying particular attention to the experiences of women in Africa, Asia, and the Meddle East. Topics addressed include, but are not limited to: gender norms, religion, tradition, polygamy, motherhood, education reproductive health, wifehood, human trafficking, and the caste system. In each case, the emphasis will not be on victimization, but rather, the resilience and adaptability of women as historical actors in their world. *Meert*

### PLSC 372: Gender, Sex and International Politics

(1 Unit)
Prerequisites: PLSC 100 and one of either PLSC 102 or PLSC 103.
Explores how gendered norms and assumptions shape international politics. Introduces feminist approaches to international politics in order to answer questions like "where are the women?" and "how do women experience international politics differently than men because of their biological sex?" Also evaluates the 'gendered hierarchies' of international relations—gendered expectations of individuals, state and other actors. *Walling.*

## For International Students, Some Options:

### SOC 333: The Sociology of Sex and Gender

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or WGS 111, or permission of instructor.
Examines the social construction and social consequences of gender difference and gender inequality with a specific focus on the United States. Gender theory and research will be used to explore masculinity and femininity as identities, as behavioral expectations and as organizing features of social life. Covers belief systems; broad social institutions such as family, employment, media and health; experiences of sexuality and violence; and individual behavior such as personal styles and modes of interacting with others. Focuses on how gender as an organizing feature of social life benefits some and is disadvantageous to others, paying special attention to how race, ethnicity, class and sexuality intersect with gender. Gender theory and research will be used to explore masculinity and femininity as identities, as behavioral expectations and as organizing features of social life. *Melzer.*

### HIST 340: History of Women in the U.S., 1877-Present

(1 Unit)
Prerequisite: Previous course work in women's studies or history.
Does some shared history link American Indian girls sent to BIA boarding schools at the turn of the century with the immigrant girls who labored for the Triangle Shirtwaist Factory? How is "women's" history different? What difference does women's history make to U.S. history? This course considers such questions by examining the situations of women in the U.S. from 1877 forward. It introduces students to the theories and methods of women's history that scholars have developed over the last quarter century. Central to this course is the recognition that women's experiences are not simple parallels to men's, and involve differences among women such as those based on sexuality, class, race and regional factors. *Franzen.*

## Historical Contexts

This requirement emphasizes the study of women or gender in specific and detailed historical context(s) or the study of the methodology of women's or gender history.

### E&M 351: Women in Business and Leadership

(1 Unit)
Prerequisite: Junior or senior standing.
Historical and contemporary perspectives on the expanding role of women in leadership positions, both in business and in other realms, such as politics. Extensive classroom discussions and use of case studies. Issues addressed include equal pay, work-family balance, the "opt-out myth," challenges women face in various industries or occupations, and the role of corporations in hindering or supporting women's advancement. *Baker.*

### FREN 320: French Women Writers and Feminist Criticism

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent.
Analysis of works by French women writers from the Middle Ages to the present, as well as works of feminist critical theory. Conducted in French. Offered every three years. *Guenin-Lelle.*

### HIST 301: Gender in Latin American History

(1 Unit)
Prerequisite:  Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
how have conquest, race mixture, nation-building, consumer culture, and immigration impacted Latin American women and men?  This seminar examines the lives of indigenous peasents, African slaves, Spanish nuns and priests, sorceresses, movie stars, and mothers and fathers throughout the Americas. *Staff*

### HIST 340: History of Women in the U.S., 1877-Present

(1 Unit)
Prerequisite: Previous course work in women's studies or history.
Does some shared history link American Indian girls sent to BIA boarding schools at the turn of the century with the immigrant girls who labored for the Triangle Shirtwaist Factory? How is "women's" history different? What difference does women's history make to U.S. history? This course considers such questions by examining the situations of women in the U.S. from 1877 forward. It introduces students to the theories and methods of women's history that scholars have developed over the last quarter century. Central to this course is the recognition that women's experiences are not simple parallels to men's, and involve differences among women such as those based on sexuality, class, race and regional factors. *Franzen.*

## Self Making

This requirement emphasizes the feminist and gender studies examinations of processes and narratives that transform beings into gendered humans.

### SOC 230: Men and Masculinities

(1 Unit)
Prerequisite: SOC 101, or Women's and Gender Studies 111, or permission of instructor.
Examines how people are transformed into boys/men who interact in the social world through shared gendered meanings. Analyzes various socio-historical constructions of masculinity both in the United States and beyond, paying particular attention to how these differ over time, across cultures and within subcultures. Focuses on gender as a central organizing principle of society, and how this socially constructed characteristic affects individuals, society and, quite literally, the world. Discusses structural inequalities, cultural similarities and differences, intersectionality, and

individual issues related to masculinities. (This is an Inside-Out Prison Exchange Program course, whereby Albion College students travel to a local correctional facility to join incarcerated students for a semester long seminar.) *Melzer.*

### PSYC 251: Child and Adolescent Development

(1 Unit)
Prerequisite: PSYC 101.
Focuses on physical, cognitive, social and emotional development with emphasis on the periods of infancy, childhood and adolescence. Reviews methods for studying the developing person and major theoretical approaches. *Elischberger, Francis, Keyes, Staff.*

### WGS 240: Sexualities, Histories and Culture

(1 Unit)
Examines how sexuality has emerged as the basis for academic inquiry and numerous identities in the late twentieth century. Part I examines the historical research on sexuality across various cultures, considering what changes, from economic through technological, have fostered the development of sexuality-related laws, restrictions, identities and opportunities. Part II traces the theories about contemporary identities that emerged from women's and gender studies research, assessing medical, academic, religious and legal institutions as well as the grassroots resistance and alternative naming presented by individuals and communities. In Part III, students in each class have the opportunity to determine some of the topics covered. *Staff*

# Women's, Gender, and Sexuality Studies, Women Studies Emphasis, B.A.

## Requirements for Major

Eight units as well as a senior capstone experience (one-half or one unit). The requirements for each track are described below.

## Women Studies Emphasis Required Courses:

### WGS 111: Introduction to Women, Gender and Sexuality

(1 Unit)
The goal of this interdisciplinary course is to introduce students to the fields of women's, gender, and sexuality studies. Students will learn core concepts and historical and current theories that analyze women's positions, gender realities and sexual identities and cultures. This course also has a particular focus on social construction of differences and how these central issues interact with race, class, ethnicity, culture, age and abilities. Each semester students will explore four topics in depth: intersectional identities, violence, public policy and economics/work. They will also apply WGS analyses to current events and the media. *Staff*

### WGS 360: Feminist Theory

(1 Unit)
Prerequisite: WGS 106 or WGS 116 or permission of instructor.
Explores twentieth-century feminist thought from the United States and Great Britain with some attention to other influences. Grounds feminist theory within the grassroots women's movement, a social, cultural and political movement for change. Tracing the influence of feminism in the academy, the course surveys not only the critical and analytical

foundations of the field of women's studies but also the impact of women and gender-centered scholarship on the traditional disciplines. The challenges to feminist theory raised by U.S. women of color, working-class women, lesbians and other women who have experienced multiple oppressions are explored along with the women's examinations of the intersections of sexism and racism, classism, homophobia and other systems of power. *Staff*

- Capstone Experience: directed study, honors thesis, practicum, or internship

## Gender Studies Emphasis Required Courses:

### WGS 111: Introduction to Women, Gender and Sexuality

(1 Unit)
The goal of this interdisciplinary course is to introduce students to the fields of women's, gender, and sexuality studies. Students will learn core concepts and historical and current theories that analyze women's positions, gender realities and sexual identities and cultures. This course also has a particular focus on social construction of differences and how these central issues interact with race, class, ethnicity, culture, age and abilities. Each semester students will explore four topics in depth: intersectional identities, violence, public policy and economics/work. They will also apply WGS analyses to current events and the media. *Staff*

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**OR**

### SOC 333: The Sociology of Sex and Gender

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or WGS 111, or permission of instructor.
Examines the social construction and social consequences of gender difference and gender inequality with a specific focus on the United States. Gender theory and research will be used to explore masculinity and femininity as identities, as behavioral expectations and as organizing features of social life. Covers belief systems; broad social institutions such as family, employment, media and health; experiences of sexuality and violence; and individual behavior such as personal styles and modes of interacting with others. Focuses on how gender as an organizing feature of social life benefits some and is disadvantageous to others, paying special attention to how race, ethnicity, class and sexuality intersect with gender. Gender theory and research will be used to explore masculinity and femininity as identities, as behavioral expectations and as organizing features of social life. *Melzer.*

- Capstone Experience: directed study, Honors thesis, practicum, or internship

## Note

A senior exit interview will be used for assessment purposes.

**Six different courses, at least one from each of the following lists. The six courses must be selected in consultation with the program director or the faculty member in the program.**

## Institutions or Knowledge Systems

This requirement emphasizes the study of the systemic nature of gender or of the critical perspectives brought to a discipline by feminist theory or gender theory.

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(1 Unit)
Prerequisites: SOC 101 or WGS 111 and junior standing or permission of instructor.
Examines violence between intimates, primarily (but not solely) within the United States, covering a range of interpersonal relationships (children, parents, spouses, partners, acquaintances, siblings, etc.) as well as various forms of abuse (emotional, physical, neglect, sexual assault/rape, etc.) Traces intimate violence socio-historically, including theoretical, methodological, empirical and applied issues and debates within the field. Analyzes the incidence and prevalence of intimate violence, and, in the process, attempts to identify causes and solutions. Focuses on the importance of structural gender inequality in shaping individuals' violent behavior and the degree to which gender inequality influences various forms of violence. *Melzer.*

### BIOL 368: Behavioral Ecology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
Patterns and functions of behavior examined from an ecological-evolutionary perspective. Topics include history of animal behavior, behavioral genetics, habitat selection, foraging, antipredator behavior, cooperation and altruism, communication, sexual selection, mating systems, parental behavior and optimality models. Independent field studies of living animals. Lecture and laboratory. Offered in alternate years. *Staff.*

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### COMM 207: Communicating Gender

(1 Unit)
An exploration of the ways in which gender and communication interact. Students are introduced to research in the field and observe and analyze the ways in which our cultural construction of gender impacts on how we communicate and judge the communication of others. *Erlandson, Staff.*

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(1 Unit)
Methods of biblical interpretation and their relation to gender construct in society and biblical authority. Offered in alternate years. *McWhirter.*

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(1 Unit)
Prerequisite: One 100-level science course.
An examination of both the history of women and other traditionally excluded persons in science, and the way science has looked at them. The course considers such questions as: Why are there so few members of these groups in science? What contributions have these scientists made? Would science be different if more members of these groups were scientists? *Staff.*

### WGS 250: Gender and the Global Garden

Which environmentalists have won the Nobel Peace Prize? Who are the writers and scholars shaping our analyses of our food systems? Who are the global farmers? Where do gender and other identity issues fit into our responses to these questions? This class is situated at the junction of gender, environmental and food studies. Using interdisciplinary and intersectional approaches, this course examines how gender shapes our views of the environment, agriculture and food. We consider the leaders, scholars, innovators, and activists of these movements; what brought them to their commitments; and how their identities might have shaped their interests, activities and goals. The course asks how we come to see and hear certain individuals and groups while others remain hidden and how these issues of visibility and invisibility influence public opinions and public activism. We will take our own gender analysis skills into our local garden, farm and food systems. We will study relevant Michigan programs and work with the Wildcat Garden. *Staff*

## Representations

This requirement emphasizes feminist approaches or gender study approaches to the examination of gender in representations; this requirement also can involve the recovery and examination of representations that previously had been invisible due to gender bias.

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(1 Unit)
Examines the roles women have played as creators, subjects, patrons and critics of art through history. Special emphasis will be placed on theories of the social construction of gender through art in all periods and on responses of contemporary women artists to such constructions. *Wickre.*

### ENGL 251: Contemporary Literature

(1 Unit)
Prerequisite: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
A study of British and American writers whose major work has been done since 1945. *Staff*

## Global Perspectives

This requirement emphasizes the importance of gaining knowledge far from one's own subject position. For this unit, students must choose a course outside their own cultural and geographical experience.

## For U.S. Students, Some Options:

### HIST 301: Gender in Latin American History

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
how have conquest, race mixture, nation-building, consumer culture, and immigration impacted Latin American women and men? This seminar examines the lives of indigenous peasents, African slaves, Spanish nuns and priests, sorceresses, movie stars, and mothers and fathers throughout the Americas. *Staff*

### HIST 365: Women in the Global South

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
The course examines women and womanhood in a cross-cultural context, paying particular attention to the experiences of women in Africa, Asia, and the Meddle East. Topics addressed include, but are not limited to: gender norms, religion, tradition, polygamy, motherhood, education reproductive health, wifehood, human trafficking, and the caste system. In each case, the emphasis will not be on victimization, but rather, the resilience and adaptability of women as historical actors in their world. *Meert*

### PLSC 372: Gender, Sex and International Politics

(1 Unit)
Prerequisites: PLSC 100 and one of either PLSC 102 or PLSC 103.
Explores how gendered norms and assumptions shape international politics. Introduces feminist approaches to international politics in order to answer questions like "where are the women?" and "how do women experience international politics differently than men because of their biological sex?" Also evaluates the 'gendered hierarchies' of international relations—gendered expectations of individuals, state and other actors. *Walling.*

## For International Students, Some Options:

### SOC 333: The Sociology of Sex and Gender

(1 Unit)
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### HIST 340: History of Women in the U.S., 1877-Present

(1 Unit)
Prerequisite: Previous course work in women's studies or history.

Does some shared history link American Indian girls sent to BIA boarding schools at the turn of the century with the immigrant girls who labored for the Triangle Shirtwaist Factory? How is "women's" history different? What difference does women's history make to U.S. history? This course considers such questions by examining the situations of women in the U.S. from 1877 forward. It introduces students to the theories and methods of women's history that scholars have developed over the last quarter century. Central to this course is the recognition that women's experiences are not simple parallels to men's, and involve differences among women such as those based on sexuality, class, race and regional factors. *Franzen.*

## Historical Contexts

This requirement emphasizes the study of women or gender in specific and detailed historical context(s) or the study of the methodology of women's or gender history.

### E&M 351: Women in Business and Leadership

(1 Unit)
Prerequisite: Junior or senior standing.
Historical and contemporary perspectives on the expanding role of women in leadership positions, both in business and in other realms, such as politics. Extensive classroom discussions and use of case studies. Issues addressed include equal pay, work-family balance, the "opt-out myth," challenges women face in various industries or occupations, and the role of corporations in hindering or supporting women's advancement. *Baker*.

### FREN 320: French Women Writers and Feminist Criticism

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent.
Analysis of works by French women writers from the Middle Ages to the present, as well as works of feminist critical theory. Conducted in French. Offered every three years. *Guenin-Lelle.*

### HIST 301: Gender in Latin American History

(1 Unit)
Prerequisite:  Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
how have conquest, race mixture, nation-building, consumer culture, and immigration impacted Latin American women and men?  This seminar examines the lives of indigenous peasents, African slaves, Spanish nuns and priests, sorceresses, movie stars, and mothers and fathers throughout the Americas. *Staff*

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## Self Making

This requirement emphasizes the feminist and gender studies examinations of processes and narratives that transform beings into gendered humans.

### SOC 230: Men and Masculinities

(1 Unit)
Prerequisite: SOC 101, or Women's and Gender Studies 111, or permission of instructor.
Examines how people are transformed into boys/men who interact in the social world through shared gendered meanings. Analyzes various socio-historical constructions of masculinity both in the United States and beyond, paying particular attention to how these differ over time, across cultures and within subcultures. Focuses on gender as a central organizing principle of society, and how this socially constructed characteristic affects individuals, society and, quite literally, the world. Discusses structural inequalities, cultural similarities and differences, intersectionality, and individual issues related to masculinities. (This is an Inside-Out Prison Exchange Program course, whereby Albion College students travel to a local correctional facility to join incarcerated students for a semester long seminar.) *Melzer*.

### PSYC 251: Child and Adolescent Development

(1 Unit)
Prerequisite: PSYC 101.
Focuses on physical, cognitive, social and emotional development with emphasis on the periods of infancy, childhood and adolescence. Reviews methods for studying the developing person and major theoretical approaches. *Elischberger, Francis, Keyes, Staff.*

### WGS 240: Sexualities, Histories and Culture

(1 Unit)
Examines how sexuality has emerged as the basis for academic inquiry and numerous identities in the late twentieth century. Part I examines the historical research on sexuality across various cultures, considering what changes, from economic through technological, have fostered the development of sexuality-related laws, restrictions, identities and opportunities. Part II traces the theories about contemporary identities that emerged from women's and gender studies research, assessing medical, academic, religious and legal institutions as well as the grassroots resistance and alternative naming presented by individuals and communities. In Part III, students in each class have the opportunity to determine some of the topics covered. *Staff*

# Course Descriptions

# Course Numbering System

The following lists include all courses normally offered at Albion College. However, not all courses are offered every year. When possible, courses offered in alternate years are designated. For details, students should consult the Class Schedule for each semester, available online at: www.albion.edu/registrar. The College reserves the right to add or withdraw courses without prior announcement, as conditions may require.

Unless otherwise stated, 100 level courses are intended for freshmen, 200 level for sophomores, 300 and 400 level for juniors and seniors.

A list of courses which meet the core and category requirements, organized by departments, is available online at www.albion.edu/registrar.

Further information may be obtained at the Registrar's Office in the Ferguson Student, Technology, and Administrative Services Building.

# Anthropology

## ANTH 105: An Introduction to Anthropology

(1 Unit)
What does it mean to be "human"? How can we understand human variation and change? This course provides a basic introduction to anthropology, with an emphasis on cultural anthropology. It also explores archaeology, biological anthropology, and linguistics. *Chase, Harnish, Webb.*

## ANTH 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ANTH 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ANTH 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ANTH 238: South Asian Identities

(1 Unit)
ANTH 105 or SOC 101 or permission of instructor. ANTH 105 or SOC 101 or permission of instructor.
An introduction to the peoples and cultures of South Asia (Sri Lanka, India, Pakistan, Bangladesh, Nepal and Bhutan). Examines issues including caste, South Asian religions, family life, colonialism, communal violence, popular culture and the South Asian diaspora. *Chase.*

## ANTH 240: Ancient Civilizations

(1 Unit)
Prerequisite: ANTH 105 or permission of instructor.
Although the human species has been on the planet in its present form for at least 100,000 years, complexly organized societies with cities, governments and organized religions did not emerge until the last 5,000. This phenomenon took place independently throughout the globe, and while some ancient civilizations collapsed, others became the foundations upon which the modern world was constructed. Why is this so? Through a comparative analysis of Mesopotamian, Egyptian, Indus, Maya, Aztec and Incan societies, among others, students will learn to analyze the factors that have led to the emergence and transformation of civilizations. *Chase.*

## ANTH 241: Principles of Archaeology

(1 Unit)
Prerequisite: ANTH 105 or permission of instructor.
Archaeology is the investigation of human societies through the study of their material remains. It provides the only source of information regarding the period from the evolution of humans over the last two million years to the widespread adoption of the written word (in some places) over the last few thousand. During historical periods, archaeology gives voice to those rendered invisible by their exclusion from historical documents. More fundamentally, archaeology provides novel insights into the material worlds that actively shape as well as reflect social life. Students will learn the fundamentals of archaeological research through the analysis of case studies in conjunction with a series of hands-on field and laboratory exercises. *Chase.*

## ANTH 242: Biological Anthropology

(1 Unit)
Prerequisite: ANTH 105 or permission of instructor.
Biological anthropology is the holistic study of the origins and bio-cultural nature of the human species. This course addresses several of the most important areas of biological anthropology such as human evolution; patterns of human physical diversity; human health and nutrition; gender and sexuality; bioarchaeology; primatology; dynamics of genetic ancestry, race, and ethnic identity; and forensic anthropology. *Webb.*

## ANTH 248: Global Africa

(1 Unit)
Prerequisite: SOC 101 or ANTH 105, or permission of instructor.
A survey of African cultural diversity past and present. Explores the lives and livelihoods of African peoples through ethnographic case studies that span the continent. Engages stereotypes and challenges the ways in which Africa is popularly depicted in the media. Considers key issues in anthropology, including colonialism, conflict, ecology, economic development, food security, gender, childhood, religion, health, humanitarianism and globalization. *Harnish.*

## ANTH 256: Native North America

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or ETHN 103 or permission of instructor.
The historical and anthropological study of Native peoples of North America, with an emphasis on the twentieth century. Topics include federal policy, political movements, gender, the construction of identities and relationships between scholars and Native communities. Same as HIST 256. *Staff.*

## ANTH 263: Modern China

(1 Unit)
Same as HIST 263. *Staff.*

## ANTH 264: International History of Modern Japan

(1 Unit)
Same as INTN 264. *Yoshii.*

## ANTH 271: Nature and Society: An Introduction to Ecological Anthropology

(1 Unit)
Prerequisite: ANTH 105 or SOC 101 or permission of instructor.
Provides an understanding of the diverse and ever-changing relationships between people and their natural

environments. Considers the historical foundations of ecological anthropology and the human dimensions of contemporary environmental issues ranging from deforestation and desertification to ecotourism and environmental justice. Through cross-cultural case studies, students learn how human perceptions of and interactions with the environment are conditioned by social variables like gender, race, politics, economics and religion/worldview. *Harnish.*

## ANTH 279: Global Health

(1 Unit)
ANTH 105 or SOC 101, or permission of instructor
This course explores the economic, cultural, and political factors leading to the uneven distribution of health and disease around the world. Students will learn about the global burden of various diseases -- acute and chronic, epidemiological transitions, and syndemics. Programming considerations and global health goals will also be considered. The course will draw from public health, epidemiology, (medical) anthropology, sociology, and economics. *Webb.*

## ANTH 287: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. May be taken more than once for credit. *Staff.*

## ANTH 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. May be taken more than once for credit. *Staff.*

## ANTH 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. May be taken more than once for credit. *Staff.*

## ANTH 315: Anthropological Theory

(1 Unit)
ANTH 105, junior standing recommended
This course questions what anthropologists should study and how they should study it by examining key theories and theorists that have shaped the discipline. By focusing on the foundational works comprising the "anthropological cannon," the course considers how the basic assumptions, research methods, and social conditions of anthropological practice have changed over time. This overview of the history of theorizing about society and culture allows for examination of the discipline's past, present, and future. *Webb.*

## ANTH 320: Indigenous Peoples of Latin America

(1 Unit)
This course surveys the cultural diversity of contemproary indigenous peoples living in Latin America. It traces how indigenous cultural traditions and societies have both continues and changed since through European conquest, colonialism, and statehood. The course emphasizes language rights, territorial rights, sovereignty, and state violence through the lens of anthropology. *Webb.*

## ANTH 325: Methods in Anthropology

(1 Unit)
ANTH 105, junior standing recommended
How do anthropologists practice their craft? What exactly do they do "out there" in the field and what is unique about their modes of studying the human experience? This course examines the primary methods and ethical issues involved in anthropological fieldwork. Particular attention will be paid to research design, participant observation, and the representation of cultures through ethnographic writing and museum curation. *Harnish.*

## ANTH 357: Violent Environments

(1 Unit)
Prerequisite: ANTH 105 or SOC 101 and junior standing or permission of instructor.
Does environmental degradation produce violence? What is the relationship between population growth, resource scarcity and violent conflict? In what ways do different environments (e.g., African national parks, Appalachian coal mines, hurricane-ravaged coastal cities) feature differential access to and control over natural and economic resources? This course first explores anthropological perspectives on violence, including biological, archaeological and cultural approaches to understanding war. Then, it investigates the multifaceted linkages between environments and conflict—the articulations among resource extraction, urbanization, economic development, population growth, biotechnology, biodiversity, natural disasters, human health, structural violence and social inequality. *Harnish.*

## ANTH 365: The Archaeology of Empire

(1 Unit)
Prerequisite: ANTH 105 or SOC 101 and junior standing or permission of instructor.
The global interconnections and inequalities that characterize the twenty-first century have their origins in the sixteenth-century European imperial expansions that drew peoples from all regions of the globe into novel economic, political and ideological relationships that fundamentally transformed the identities of all parties involved. European imperialism, however, was not a unique incidence of this phenomenon, but was rather the most recent in a series of colonial encounters that began over 5,000 years ago as the institutions of the world's first cities expanded their influence beyond the floodplains of Mesopotamia. In this course students gain a more complete understanding of the modern world through the critical review of case studies including Uruk, Greek, Roman, Aztec, Incan and European civilizations. *Chase.*

## ANTH 366: Archaeology of Social Change

(1 Unit)
Prerequisite: ANTH 105 or SOC 101 and junior standing or permission of instructor.
In the last 6,000 years people from all over the world have shifted from living in societies in which status and leadership was based on age, gender, and individual achievement to societies in which some people are born into superior social positions. In most societies today—including our own—small groups of people have access to greater resources and economic benefits for little reason other than their family history. How did this come about? Why did people allow themselves to become the subjects of others? Archaeological case studies are analyzed in an attempt to understand this fundamental transition in human society. *Chase.*

## ANTH 368: Medical Anthropology

(1 Unit)
ANTH 105 and junior standing or permission of the instructor.
A survey of the cultural practices that contribute to understandings of health and disease. The course introduces students to a broad range of topics in medical anthropology, including examination of treatment therapies in Western and non-Western cultures. Students are encouraged to move beyond purely biological understandings of health and disease and consider how healing practices are embedded within social, cultural, economic, and political domains. This course will be of particular interest to premedical students and those interested in allied health professions. *Webb.*

## ANTH 387: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ANTH 388: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ANTH 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ANTH 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

## ANTH 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

## ANTH 401: Seminar

(1/2 Unit)
*Staff.*

## ANTH 402: Seminar

(1 Unit)
*Staff.*

## ANTH 408: Senior Paper

(1 Unit)
Prerequisite: Senior standing, a major in the department.
An intensive study and written paper emphasizing a topic in either anthropology or sociology. *Staff.*

## ANTH 411: Directed Study

(1/2 Unit)
*Staff.*

## ANTH 412: Directed Study

(1 Unit)
*Staff.*

# Art and Art History: Art

## ART 102: Creative Process 2-D

(1 Unit)
Designed to provide the student with the ability to work with and appreciate basic forms and concepts of art in both traditional and contemporary modes. Lecture and studio. *Dixon, Feagin, McCauley.*

## ART 103: Creative Process 3-D

(1 Unit)
Designed to introduce the student to fundamental concepts in creating and viewing three-dimensional art. Lecture and studio. *Chytilo.*

## ART 121: Drawing

(1 Unit)
Designed to introduce the beginning student to a variety of drawing media, subject matter and drawing concepts. May be taken concurrently with Art 102. *Dixon.*

## ART 201: Digital Tools I

(1 Unit)
Prerequisite: ART 121 or permission of instructor.
Designed to familiarize students with basic skills and techniques in creating digitally assisted visual art. Initial projects serve to introduce software tools; later projects increasingly reinforce skill development while concentrating on idea generation and individual approaches to art making. Peripheral hardware, including scanners, digital cameras, and inkjet and laser printers, are utilized in generating work. *Feagin.*

## ART 222: Advanced Drawing: Figure

(1/2 Unit)
Prerequisite: ART 121.
The human form is represented in a variety of media. May be repeated for credit. *Dixon.*

## ART 223: Advanced Drawing: Figure

(1 Unit)
Prerequisite: ART 121.
The human form is represented in a variety of media. May be repeated for credit. *Dixon.*

## ART 231: Painting I

(1 Unit)
Prerequisite: ART 121.

An introduction to the vocabulary, materials and methods of oil painting. A range of technical and aesthetic considerations will be addressed. *Dixon.*

## ART 241: Photography I

(1 Unit)
An introduction to the technical and aesthetic aspects of photography and its cultural significance: photo literacy, compositional elements, and the creation and critique of work through the use of emerging technology in the field of photography. *Feagin.*

## ART 242: Intermediate Photography I

(.5 Unit)
Prerequisite: ART 241.
An introduction to the technical and aesthetic aspects of photography: basic functions of the camera, basic darkroom techniques, critique of work. *Feagin.*

## ART 243: Intermediate Photography 2

(.5 Unit)
Prerequisite: ART 242.
Building on assignments from ART 242 with an emphasis on imaginative approaches and individual work. Explorations with various cameras and methods of printing. *Feagin.*

## ART 251: Printmaking I

(1 Unit)
Prerequisite: ART 121 or ART 102.
An introduction to relief and intaglio print processes including woodcut, linocut, metal plate etching, drypoint and aquatint. Idea generation emphasized. *McCauley.*

## ART 261: Ceramics I

(1 Unit)
An introduction to ceramics as an art form. Begins with basic hand-forming and conceptual problem-solving in clay and then covers throwing, glazing and various firing methods. *Chytilo.*

## ART 262: Pottery and Japanese Traditions

(1 Unit)
Explores the aesthetic traditions and political history of the Japanese tea ceremony and pottery-making. Emphasizes the artistic and meditative execution of tea making with wares of art for tea making and tea consumption, in addition to the study of the practicality of tea as a vehicle for negotiation, deliberation and social interaction in Japan. Same as International Studies 262. Same as INTN 262 . *Chytilo/Dabney.*

## ART 263: Intermediate Ceramics

(1/2 Unit)
Prerequisite: ART 261 or ART 262.

A continuation of the processes and techniques learned in ART 261 or ART 262. Emphasis is placed on creating innovative work with greater skill than acquired in previous classes. *Chytilo.*

## ART 264: Advanced Intermediate Ceramics

(1/2 Unit)
Prerequisite: ART 263.
A continuation of the processes and techniques learned in ART 263. Emphasis is placed on creating innovative work with greater skill than acquired in previous classes. *Chytilo.*

## ART 271: Sculpture I

(1 Unit)
Prerequisite: ART 103 or permission of instructor.
Problems dealing with concepts in three-dimensional space and form, and the introduction to the use of basic tools and techniques with wood, stone, metal and mixed media. *Chytilo*.

## ART 296: Professional Practices in Art

(1/2 Unit)
Designed to provide the emerging artist with multiple experiences in preparation for professional opportunities in the fine arts. Must be taken spring semester of the senior year. (It is strongly recommended that students interested in graduate school take this class in the junior and senior year.) *Chytilo, Dixon, Feagin, McCauley.*

## ART 301: Video Art

(1 Unit)
An introduction to the use of video as a medium for individual expression and creativity. Basic video skills and procedures in planning and producing a video are presented through demonstrations, lectures and practice sessions. Working with digital cameras and Premiere editing software, participants become familiar with the operation of the video cameras and editing deck, sound recording, storyboarding, and lighting techniques. *Feagin.*

## ART 303: Digital Tools 2

(1 Unit)
Prerequisite: ART 201 or ART 241, or permission of instructor.
This course builds off of skills obtained in ART 201, Digital Tools 1. An advanced computer art studio course addressing the special visual and philosophical concerns around using technology in the process of making art. Reading, analysis and discussion of contemporary works, and creation of individual work are key components of this course. *Feagin.*

## ART 324: Advanced Drawing: Workshop

(1/2 Unit)
Prerequisite: ART 121.
Contemporary concepts and techniques related to drawing are explored through studio practice. May be repeated for credit. *Dixon, McCauley.*

## ART 325: Advanced Drawing: Workshop

(1 Unit)
Prerequisite: ART 121.
Contemporary concepts and techniques related to drawing are explored through studio practice. May be repeated for credit. *Dixon, McCauley.*

## ART 331: Painting II

(1 Unit)
Prerequisite: ART 231.
Assigned problems for individual solutions. Medium: oil. *Dixon.*

## ART 332: Painting III

(1 Unit)
Prerequisite: ART 331.
Individually assigned problems in advanced painting concepts and techniques. *Dixon.*

## ART 333: Painting Workshop I

(1 Unit)
Prerequisite: ART 332.
Individual problems in the philosophical and technical aspects of painting. Self-reliance and individuality of concept stressed. *Dixon.*

## ART 334: Painting Workshop II

(1 Unit)
Prerequisite: ART 333.
Continuation of ART 333. *Dixon.*

## ART 335: Painting Workshop III

(1 Unit)
Prerequisite: ART 334.
Continuation of ART 334. A written statement discussing visual and philosophical aspects of a body of work will be presented to the art faculty for review. *Dixon.*

## ART 341: Photography II

(1 Unit)
Prerequisite: ART 241 or permission of instructor.
Advanced assignments in photography with emphasis on imaginative approach and individual work. Lecture and lab. Critique of work. *Feagin.*

## ART 342: Photography III

(1 Unit)
Prerequisite: ART 241.
Advanced investigation into photographic materials including medium- and large-format negatives, advanced darkroom

techniques and alternative processes with an emphasis on integrating process, materials and concept in an individualized body of work. *Feagin.*

## ART 343: Photography Workshop

(1 Unit)
Prerequisite: ART 342.
Individual exploration of technical and/or aesthetic issues in photographic media. *Feagin.*

## ART 344: Photography Workshop II

(1 Unit)
Prerequisite: ART 343.
A continuation of ART 343. *Feagin.*

## ART 345: Photography Workshop III

(1 Unit)
Prerequisite: ART 344.
A continuation of ART 344. Focuses on creation of a strong body of work in an area of personal interest, along with compilation into a matted portfolio with images and a well-developed artistic statement discussing the material and conceptual aspects of the work. *Feagin.*

## ART 346: Color Photography

(1 Unit)
Prerequisite: ART 241.
An advanced photography course introducing the basics of color photography. Covers color theory as applicable to photography, color exposure, color printing process and studio lighting. Emphasizes integrating process, materials and concept in an individualized body of work. *Feagin.*

## ART 351: Printmaking II

(1 Unit)
Prerequisite: ART 251.
Continuing study of relief and intaglio print processes with advanced applications. Development of personalized imagery emphasized. *McCauley.*

## ART 352: Printmaking III

(1 Unit)
Prerequisite: ART 351.
Advanced problems in relief and intaglio with emphasis on integration of print processes and development of personalized imagery. *McCauley.*

## ART 353: Printmaking Workshop I

(1 Unit)
Prerequisite: ART 352.

Workshops provided for concentrated development in all phases of printmaking. Discussion of traditional and contemporary printmaking in relation to individual problems. Concept development is strongly emphasized. *McCauley.*

## ART 354: Printmaking Workshop II

(1 Unit)
Prerequisite: ART 353.
Continuation of ART 353. *McCauley.*

## ART 355: Printmaking Workshop III

(1 Unit)
Prerequisite: ART 354.
Continuation of ART 354. *McCauley.*

## ART 356: Visual Poetry

(1 Unit)
A study of writing poetry and its presentation in printed form. Intended for writers and visual artists alike, this course teaches the fundamentals of writing poetry and letterpress printing. Participants both write their own poems and, using movable type and hand-operated printing presses, set and print their own poems as broadsides and artists' books. *McCauley, Mesa.*

## ART 357: Book Arts

(1 Unit)
Prerequisite: ART 121 and one other studio art course.
Designed to teach students the traditional and contemporary craft of handmade visual books. Students investigate book forms through hands-on demonstrations to gain experience in a wide range of book structures as preparation for individual creations. Exploration of a diverse range of media in the construction of individual books is encouraged and supported. *McCauley.*

## ART 361: Ceramics II

(1 Unit)
Prerequisite: ART 261.
A continuation of ART 261 with more advanced work in ceramic processes and theories including clay and glaze formulation. Emphasis also is placed on development of personal expression and direction with the medium. Laboratory and lecture. *Chytilo.*

## ART 362: Ceramics III

(1 Unit)
Prerequisite: ART 361.
Advanced problems in ceramic design. *Chytilo.*

## ART 363: Ceramics Workshop I

(1 Unit)
Prerequisite: ART 362.

Each semester students will explore a different technical and/or aesthetic subject of the ceramic processes on an individualized basis. *Chytilo.*

## ART 364: Ceramics Workshop II

(1 Unit)
Prerequisite: ART 363.
An emphasis is placed on the student's development in an area of personal interest. *Chytilo.*

## ART 365: Ceramics Workshop III

(1 Unit)
Prerequisite: ART 364.
Continuation of ART 364. A strong body of work accompanied by a group of images and a written thesis will be presented to the art faculty for review. *Chytilo.*

## ART 371: Sculpture II

(1 Unit)
Prerequisite: ART 271.
Individually arranged problems in advanced sculptural concepts and techniques. *Chytilo.*

## ART 372: Sculpture III

(1 Unit)
Continuation of ART 371. *Chytilo.*

## ART 373: Sculpture Workshop I

(1 Unit)
Prerequisite: ART 372.
Individually arranged exploration and development of specific sculptural directions. A more intense involvement in the visual and philosophical implications of a body of work is emphasized. *Chytilo.*

## ART 374: Sculpture Workshop II

(1 Unit)
Prerequisite: ART 373.
Continuation of ART 373. *Chytilo.*

## ART 375: Sculpture Workshop III

(1 Unit)
Prerequisite: ART 374.
Continuation of ART 374. A written statement discussing visual and philosophical aspects of a body of work with accompanying images will be presented to the art faculty for review. *Chytilo.*

## ART 381: Process

(1/2 Unit)
Prerequisite: Permission of instructor.
The process of making and conceiving art, often from a multi-media, interdisciplinary point of view. Examples: The concept of assemblage, photo-sensitive media, readings for current art, structural systems, critical studies of the college collections, color perception and performance, current drawing concepts. *Staff.*

### ART 382: Process

(1 Unit)
Prerequisite: Permission of instructor.
The process of making and conceiving art, often from a multi-media, interdisciplinary point of view. Examples: The concept of assemblage, photo-sensitive media, readings for current art, structural systems, critical studies of the college collections, color perception and performance, current drawing concepts. *Staff.*

### ART 396: Professional Practices in Art

(1/2 Unit)
Designed to provide the emerging artist with multiple experiences in preparation for professional opportunities in the fine arts. Must be taken spring semester of the senior year. (It is strongly recommended that students interested in graduate school take this class in the junior and senior year.) *Chytilo, Dixon, Feagin, McCauley.*

## Art and Art History: Art History

### ARTH 110: Why Art Matters

(1 Unit)
This course explores the fundamentals of art and the place of art in the historical moment and cultures from which it arises. As part of the course we will ask why and how art has meaning in human life. Students will learn a variety of basic tools of analysis through interaction with art, looking and reading assignments, discussion, and written exercises. The ultimate goal of this course is to stimulate and empower students to think critically and express themselves will about the art they encounter. *Staff*

### ARTH 110: Why Art Matters

(1 Unit)
Prerequisites: None.
This course explores the fundamentals of art and the place of art in the historical moment and cultures from which it arises. As part of the course we will ask why and how art has meaning in human life. Students will learn a variety of basic tools of analysis through interaction with art, looking and reading assignments, discussion, and written exercises. The ultimate goal of this course is to stimulate and empower students to think critically and express themselves well about the art they encounter. *Staff*

### ARTH 116: World Art

(1 Unit)
An introduction to world art in its historical context, considering the dominant arts of each continent framed within historical, religious, political, economic and social events. Incorporates basic tools of art historical analysis and criticism. *Wickre, Staff.*

### ARTH 117: Global Art History Before 1400

(1 unit)
This course provides students with a survey of artifacts, art objects, and architectural sites from across the globe, before the year 1400. Through focused analyses of visual cultures and built environments across different spaces and times, this record of the deep past demonstrates how humanity, arguably, has always been creatively expressive. It also illustrates how closely tied artistic patronage is to economic and political power. This course underscores how art-making is rooted in the exchange of ideas inasmuch as the economic and political realities of trade, migrations, pilgrimage, diplomacy, war and conquest. Students will explore how various cultures adopted artistic practices shaped by social networks, economic exchanges, religious beliefs, political power and historical events before the year 1400. *Demerdash, Wickre.*

## ARTH 118: Global Art History After 1400

(1 unit)
This course provides students with a survey of artifacts, art objects, and architectural sites from across the globe, beyond the year 1400. It examines the histories of artistic and architectural traditions across many cultures and geographies of the world, from the early modern period to the present day. Through focused analyses of visual cultures and built environments across different spaces and times, this course demonstrates how closely tied artistic patronage is to economic and political power. This course underscores how art-making is rooted in the exchange of ideas inasmuch as the economic and political realities of trade, migrations, pilgrimage, diplomacy, war, conquest, slavery, colonialism and imperialism, and the spread of technologies. Students will explore how various cultures adopted artistic conventions shaped by social networks, economic exchanges, religious beliefs, political power and historical events after the year 1400. *Demerdash, WIckre.*

## ARTH 206: Art of Egypt and North Africa

(1 Unit)
Explores how works of art and architecture contributed to these important cultures. Looks closely at art in its religious and socio-political contexts, including especially the contents and decorations of tombs and temples in the Nile river valley. Also examines architecture and art objects from Mesopotamia as reflections of early ideas of personal religion and the city-state. *Staff.*

## ARTH 208: Early Christian and Byzantine Art

(1 Unit)
Provides a foundation of knowledge in Early Christian and Byzantine art, including painting, sculpture, textile, metalwork, glasswork, architecture and illumination created from the period of the late Roman Empire and early Middle Ages to the fifteenth century in the Eastern Empire, or Byzantium. Emphasizes the identification of works, styles, artists and the broad political/religious contexts in which pieces of art were conceived and executed. *Staff.*

## ARTH 212: Art and Religion of the Medieval World

(1 Unit)
Studies art and Christianity in Western Europe from the late Roman Empire to the fifteenth century, including consideration of style and iconography, through art forms ranging from catacomb paintings to manuscripts for private devotion to Gothic cathedrals. Considers interpretations of the Middle Ages from the ninth century to the present, emphasizing how these interpretations reflect and construct the intellectual traditions of their authors. *Staff.*

## ARTH 213: Art and Science of Leonardo's Day

(1 Unit)
Investigates Italian Renaissance painting and sculpture from 1400 to 1550, including works by Giotto, Piero, Leonardo,

Michelangelo and others. Considers interpretations of Renaissance art, architecture and science, and the concepts of Humanism and Renaissance from the time of Petrarch to the present. *Wickre.*

## ARTH 214: Baroque Art

(1 Unit)
Explores the diversity of artistic styles in Europe between 1600 and 1750. Considers the expanding concepts of world geography, trade and colonization and its impact on art, an awakening sense of self for both artists and patrons, systems of training, theories of gender in the production and consumption of art works, and ways of describing and inscribing gender, race, class and sexual orientation in baroque art. *Wickre.*

## ARTH 216: Modern and Contemporary Art

(1 Unit)
Survey of twentieth and twenty-first century European and American painting, sculpture, photography, and time arts. Examines stylistic trends, changes in ideas about the nature and purposes of art and the relationships between art and society. Discussion of the impact of contemporary critical theory on the evolution of the art of the twentieth century. *Wickre.*

## ARTH 217: American Art, 1600-1913

(1 Unit)
Examines the major cultural movements, artists and art works in what would become the United States from the colonial period to the advent of modernism with the Armory Show in New York in 1913. *Wickre.*

## ARTH 219: Impressionism: Précis to Prologue

(1 Unit)
Critically examines paintings of the Impressionists in France in the context of historical documents from the period, contemporary critical writings about the artists and paintings, and the art historical texts generated about the art. A study of Impressionism's roots in French romanticism and realism introduces the course. Special attention is paid to the particular historical circumstances that gave rise to Impressionism as a movement, and to the gendered nature of both the production and reception of Impressionist paintings. *Wickre.*

## ARTH 220: American Indian Art

(1 Unit)
Examines the art history of American Indian cultures in the United States, with a focus on traditional arts at the time of European contact, in the immediate aftermath of that contact, and on the emergence of a contemporary arts culture within American Indian contexts. Also considers how mythology and stereotyping have created an image of "the Indian" and how that image was and is used in majority culture. Presents a broad array of resources, including Albion College's collection of American Indian objects and prints, and public and private art collections. *Wickre.*

## ARTH 310: Women and Art

(1 Unit)
Examines the roles women have played as creators, subjects, patrons and critics of art through history. Special emphasis will be placed on theories of the social construction of gender through art in all periods and on responses of contemporary women artists to such constructions. *Wickre.*

## ARTH 311: Art as Political Action

(1 Unit)
Examines art that invites or encourages social awareness and/or action. Includes studies of "high art" media, such as photography, painting and sculpture, and non-traditional art forms including performance art, public murals, crafts, environmental art and others. Thematically arranged around politicized issues such as race, rape and domestic violence, concepts of the body, pacifism and war, poverty, illness and AIDS. The course begins with political movements that relied heavily on visual images to achieve their purposes. *Wickre.*

## ARTH 312: Race and Its Representation in American Art

(1 Unit)
Examines representations of individuals and groups who traditionally have been viewed as "others": African Americans, Native Americans, Asians and Chicanos/Chicanas as contrasted with images of members of the dominant culture. Considers how visual art has served to reflect social conditions and situations and to construct identities for all ethnic groups in the American psyche. *Wickre.*

## ARTH 313: History of Prints

(1 Unit)
Focuses on how artists have used the forms and techniques of printmaking to express themselves visually from the fifteenth century to the present. The course uses three approaches: (1) art history lectures and discussions based on readings; (2) connoisseurship in studying prints from the College's permanent collection; and (3) practical application in producing prints in some of the major printmaking techniques. Students will begin to understand how the potential and limitations of various traditional techniques enable particular types of visual communication. Emphasis is placed on student-facilitated learning, exploration, discovery and collaborative processes. *Wickre, McCauley.*

## ARTH 315: Earth, Art, and the Environment

(1 Unit)
Examines American (U.S.) and European art and architecture that interacts with the environment and calls attention to the benefits and consequences of human interaction with the environment in a national and global context. Focuses on art, architecture and design projects produced from 1960 to the present and materials that set the context for artistic concerns about the environment beginning in the nineteenth century. *Wickre.*

## ARTH 317: Art and Theory

(1 Unit)
Introduces students to a variety of methods used to interpret works of art. Examines the specialized literature of art history from the sixteenth century to the present. Theories and methods will be applied to art from all periods. *Wickre.*

## ARTH 320: Feminist Art

(1 Unit)
The 1970s Feminist Art Movement introduced to the art world a revolution in attitudes and practices. The significant reverberations of that movement are felt to the present. Covers the social context, causes and effects, and major players in the Feminist Art Movement as well as its continuing impact. *Wickre.*

## ARTH 326: Issues in Contemporary Art

(1 Unit)
Examines issues, theory and art from the 1960s to the present, from the standpoint of theory, practice and the objects produced. Focuses on painting, sculpture, and new media from around the world and emphasizes critical reading, writing, and discussion. *Wickre.*

# Art and Art History: Special Studies

## ART 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ART 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ART 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ART 287: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ART 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ART 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ART 387: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ART 388: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ART 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### ART 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

### ART 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

### ART 401: Seminar

(1/2 Unit)
*Staff.*

### ART 402: Seminar

(1 Unit)
*Staff.*

### ART 411: Directed Study

(1/2 Unit)
*Staff.*

### ART 412: Directed Study

(1 Unit)
*Staff.*

### ARTH 187: Special Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff*

### ARTH 188: Special Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff*

### ARTH 189: Special Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff*

### ARTH 287: Special Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff*

### ARTH 288: Special Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff*

### ARTH 289: Special Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff*

### ARTH 387: Special Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff*

### ARTH 388: Special Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff*

### ARTH 389: Special Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff*

### ARTH 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff*

### ARTH 401: Seminar

(1/2 Unit)
*Staff*

### ARTH 402: Seminar

(1 Unit)

### ARTH 411: Directed Study

(1/2 Unit)
*Staff*

### ARTH 412: Directed Study

(1 Unit)
*Staff*

# Biology

The courses listed below count toward the biology major or minors unless otherwise noted. Some courses in the department are offered in alternate years and are so designated below. Please consult with the instructor or with the Class Schedule, available online or at the Registrar's Office, to determine when a course will next be offered.

## BIOL 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## BIOL 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## BIOL 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## BIOL 195: Ecology, Evolution and Biodiversity

(1 Unit)
Focuses on whole organisms and their evolutionary and ecological relationships. Evolutionary processes, biological diversity, conservation biology and human impacts on ecology and biodiversity are major themes. Skills introduced are hypothesis testing, experimental design, use of primary literature in writing assignments and basic statistics. Lecture and laboratory. *Staff.*

## BIOL 210: Cell and Molecular Biology

(1 Unit)
Prerequisite: BIOL 195. Prerequisite or corequisite: CHEM 152.
Focuses on organisms at the cellular and molecular levels, including biological chemistry, bioenergetics and metabolism, Mendelian and molecular genetics, cellular communication and the molecular control of the cell cycle. Builds upon skills from BIOL 195 to expand abilities in hypothesis testing and experimental design to produce an individual research paper, and to carry out more advanced statistical analyses. Lecture and laboratory. *Staff.*

## BIOL 211: Sophomore Research

(1/2 Unit)
Prerequisites: Sophomore standing and invitation of instructor.
Independent research projects for invited sophomores. *Staff.*

## BIOL 216: Vascular Plants

(1 Unit)
Prerequisite: BIOL 195.
Morphology, taxonomy and distribution of vascular plants. Representatives of local flora receive special attention in laboratory and field studies. Lecture and laboratory. *Staff*

## BIOL 225: Invertebrate Zoology

(1 Unit)
Prerequisite: BIOL 195.
Field-oriented course emphasizing evolution, classification, ecology, behavior and natural history of invertebrate animals. Class involves field trips and use of the Whitehouse Nature Center. Lecture and laboratory. *Cahill.*

## BIOL 227: Vertebrate Zoology

(1 Unit)
Prerequisite: BIOL 195.
Classification, behavior, ecology and evolution of the vertebrates. Mammals and birds are emphasized more than other groups. Lecture and laboratory. *Hallinger*.

## BIOL 237: Ecology

(1 Unit)
Prerequisite: BIOL 195.
A study of interactions between organisms and their environment including adaptation, competition, parasitism, population and community dynamics and the ecosystem concept. Class involves field trips and use of the Whitehouse Nature Center. Lecture and laboratory. *Lyons-Sobaski.*

## BIOL 240: Conservation Biology

(1 Unit)
Prerequisite: BIOL 195.
Presents concepts and issues concerning the causes and consequences of the loss of biodiversity. Emphasizes the science of conservation biology including the evolutionary potential of populations and species, as well as the history of the field, international efforts to conserve species, and the current status of policies such as the U.S. Endangered Species Act. Includes a conservation-related outreach project. *Lyons-Sobaski.*

## BIOL 242: Fundamentals of Cellular and Molecular Neuroscience

(1 Unit)
Prerequisites: NEUR 241 and BIOL 195, or permission of instructor.
An introduction to neuroscience with emphasis at the cellular and molecular levels. Covers structure and function of neurons and glial cells, electrical and chemical synapses, neurotransmitters, aspects of vision, axon guidance and outgrowth, energy metabolism in the brain, and the hormones and brain regions that affect eating activity and behavior. NEUR 242 *Albertson.*

## BIOL 245: Marine Biology

(1 unit)
Prerequisite: BIOL 195.
An introduction to marine biology, including basic principles of ecology, evolution, and the physical and chemical components of the oceans. Topics will include how the physical and chemical principles of the ocean impact

organisms, an overview of community ecology in different marine habitats, and how humans are impacting marine systems. *Cahill*

## BIOL 248: Ornithology

(1 Unit)
Prerequisite: BIOL 195.
The biology of birds with emphasis on evolution, behavior, ecology and conservation. Field experience in identification, population studies, bird banding, song recording and analysis, and carrying out a research project. Students will learn to critically evaluate the ornithological literature. Lecture and laboratory. *Hallinger*.

## BIOL 260: Introduction to Bioinformatics

(1 unit)
Prerequisites: BIOL 210 or permission of instructor.
This is a hands-on, project-based course designed to provide students with an opportunity to conduct meaningful research projects using web-based bioinformatics tools. In previous projects, students have analyzed the genome of a newly-discovered bacteriophage, which was isolated by an Albion student in a previous semester and have done comparative genomic analyses of a chromosomal region from one or more Drosophila species as part of a larger collaborative genomics project. *Saville*

## BIOL 287: Selected Topics

(1/4 Unit)
Prerequisite: BIOL 195.
An examination of subjects or areas not included in other courses. *Staff.*

## BIOL 288: Selected Topics

(1/2 Unit)
Prerequisite: BIOL 195.
An examination of subjects or areas not included in other courses. *Staff.*

## BIOL 289: Selected Topics

(1 Unit)
Prerequisite: BIOL 195.
An examination of subjects or areas not included in other courses. *Staff.*

## BIOL 295: Evolution

(1 Unit)
Prerequisite: BIOL 195 or permission of instructor.
A study of the course and processes of organic evolution. Topics include the history of ideas of evolution, population genetics, population ecology, speciation, adaptation, coevolution, evolutionary rates, evolutionary convergences, mass extinctions and biogeography. Lecture and laboratory. Offered in alternate years. *Lyons-Sobaski.*

## BIOL 296: Ecological Genetics

(1 Unit)
Prerequisite:BIOL 195 .
An introduction to ecological genetics: the study of gene frequencies and selection pressures within natural or managed populations, with a focus on how ecology impacts gene frequencies. Topics include understanding concepts of genetic variation, recombination, linkage disequilibrium, selection, gene flow, genetic drift and mutation, as well as quantitative genetics. *Cahill, Lyons-Sobaski.*

## BIOL 300: Genetics

(1 Unit)
Prerequisite: BIOL 195 , BIOL 210.
Mechanisms of inheritance and of gene structure and function in living organisms. Both classical and molecular genetics are considered as they relate to function. *Staff.*

## BIOL 301: Cell Biology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
An in-depth investigation of biological systems at the cellular, subcellular and molecular levels. Studies of a variety of cell types and energy relations within cells. Lecture emphasizes metabolism, metabolic regulation and cellular diversity. Laboratory emphasizes measurement and analysis of subcellular features. *Cervantes.*

## BIOL 309: Vertebrate Paleontology

(1 Unit)
Prerequisite: GEOL 103 or BIOL 195.
Must be taken as Biology 309 for credit toward the major. Lecture and laboratory. Same as GEOL 309. *Staff.*

## BIOL 312: Genetics Laboratory

(1/2 Unit)
Prerequisite: BIOL 300 Genetics Project-based laboratory course that will introduce students to general techniques in genetics.
Under faculty guidance, students will design and carry out their own experiments, read primary literature, and present results in written and oral format. *Staff.*

## BIOL 314: Comparative Anatomy

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
Comparative anatomical study of vertebrate organ systems, their development and evolution. Lecture and laboratory. *Hallinger.*

## BIOL 321: Medical Microanatomy

(1 Unit)
Prerequisites: BIOL 195 and BIOL 210
Medical Microanatomy is the study of cells and tissues using light and electron microscopy. This course stresses the relationships of structure and function, and medical conditions that can result from cell or tissue damage. Lecture and laboratory. *Cervantes*

## BIOL 324: Developmental Biology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
The genetic, molecular and cellular mechanisms underlying early development of multicellular organisms. Potential topics include fertilization and early development, gene regulation during development, neural pathfinding, cell signaling, cell division and growth, organogenesis, limb development, metamorphosis, regeneration, sex determination, the evolution of development, genomics, and stem cell research. Lecture and laboratory. *Albertson.*

## BIOL 332: Microbiology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor; CHEM 154 recommended.
Introduction to the microbial world. Explores the morphology, physiology, genetics and diversity of microorganisms. Stresses the relationships among microbes and other organisms, including humans. Lecture and laboratory. *Olapade.*

## BIOL 337: Biochemistry

(1 Unit)
Prerequisites: CHEM 212
Must be taken as Biology 337 for credit toward the major. Lecture. Same as CHEM 337. *Staff.*

## BIOL 341: Physiology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor; CHEM 154 recommended.
A study of the function of living organisms. Each physiological system is examined at the molecular, cellular, and tissue level. Particular focus is given to how each system is regulated and the interplay between systems. Lecture and laboratory. *Rabquer.*

## BIOL 360: Genomic Analysis

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
*Saville*

## BIOL 362: Molecular Biology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor; CHEM 154 recommended.
The theory and practice of modern molecular genetics will be explored. Techniques potentially considered include: DNA cloning, DNA hybridization, the polymerase chain reaction, DNA sequencing, and the expression of cloned genes in bacteria. Lecture/discussion and laboratory. Offered in alternate years. *Saville.*

## BIOL 365: Environmental Microbiology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
Microbes in action: bioremediation, biodegradation, cycling of nutrients and energy flow, biopesticides and phytopathogens, spread of antibiotic resistance, molecular ecology of infectious diseases, microbial symbionts and

extremophiles. Explores these and other topics through discussions, field trips and experimental work. Lecture and laboratory. Offered in alternate years. *Olapade.*

## BIOL 367: Virology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
Are viruses living organisms or not? Addresses this and many more questions in molecular architecture, replication strategies, transmission modes, pathogenicity, carcinogenicity and usefulness of viruses. Lecture and discussion. Offered in alternate years. *Olapade.*

## BIOL 368: Behavioral Ecology

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
Patterns and functions of behavior examined from an ecological-evolutionary perspective. Topics include history of animal behavior, behavioral genetics, habitat selection, foraging, antipredator behavior, cooperation and altruism, communication, sexual selection, mating systems, parental behavior and optimality models. Independent field studies of living animals. Lecture and laboratory. Offered in alternate years. *Staff.*

## BIOL 371: Pathophysiology

(1 Unit)
Prerequisites: BIOL 210, CHEM 152. CHEM 154 recommended.
Develops an understanding of the physiological basis of disease. Relates changes in function that contribute to disease states in otherwise normally functioning physiological systems. Presents the functional anatomy and physiological basis of "healthy" human systems in a normal state, and then examines compromises that result from disease states. Intended for students planning to pursue post-graduate studies in programs such as nursing, physician assistant, physical therapy and medicine. *Rabquer.*

## BIOL 372: Immunology

(1 Unit)
Prerequisites: BIOL 300 or permission of instructor.
A study of the immune system. Explores innate, humoral, and cellular immune responses, and the application of immunity in health and disease through the study of scientific literature, student presentations, and project-based learning. Lecture. *Rabquer.*

## BIOL 387: Selected Topics

(1/4 Unit)
Prerequisite: BIOL 300 or permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## BIOL 388: Selected Topics

(1/2 Unit)
Prerequisite: BIOL 300 or permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## BIOL 389: Selected Topics

(1 Unit)
Prerequisite: BIOL 300 or permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## BIOL 391: Internship

(1/2 Unit)
Prerequisites: Junior or senior standing and permission of department.
No more than one unit may be counted toward the major. Offered on a credit/no credit basis. *Staff.*

## BIOL 392: Internship

(1 Unit)
Prerequisites: Junior or senior standing and permission of department.
No more than one unit may be counted toward the major. Offered on a credit/no credit basis. *Staff.*

## BIOL 401: Seminar

(1/2 Unit)
Prerequisites: BIOL 300 and junior or senior standing, or permission of instructor.
Topics in diverse areas of biology. Recent topics have included genes and cancer, literature and medicine, conservation biology, and biology of sharks and their relatives. Discussion. *Staff.*

## BIOL 402: Seminar

(1 Unit)
Prerequisites: BIOL 300 and junior or senior standing, or permission of instructor.
Topics in diverse areas of biology. Recent topics have included genes and cancer, literature and medicine, conservation biology, and biology of sharks and their relatives. Discussion. *Staff.*

## BIOL 411: Directed Study

(1/2 Unit)
Prerequisites: Junior or senior standing and approval by both the faculty sponsor and department chair of a research proposal prior to registration.
Independent research by an individual student under the direction of a staff member. A detailed summary research paper or other appropriate evidence is required at the end of the work. Normally offered on a credit/no credit basis. *Staff.*

## BIOL 412: Directed Study

(1 Unit)
Prerequisites: Junior or senior standing and approval by both the faculty sponsor and department chair of a research proposal prior to registration.
Independent research by an individual student under the direction of a staff member. A detailed summary research paper or other appropriate evidence is required at the end of the work. Normally offered on a credit/no credit basis. *Staff.*

# Business and Organizations

## BUS 111: Gerstacker Leadership Workshop

(1/4 Unit)
Explores issues faced by a wide variety of professions—from medicine to professional sports. Considers common models of strategic thinking and theory. Includes professional writing exercises and the use of Excel as an analytical tool. Students complete a final project showcasing the application of the theories and common business themes presented in the course. Required for all students who wish to pursue a business and organizations major or minor.

## BUS 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## BUS 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## BUS 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## BUS 287: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## BUS 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## BUS 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## BUS 351: International Entrepreneurial Exchange

(1 Unit)
Students work in collaboration with graduate students attending a business school in France to theoretically create a service or product to launch in the United States. After traveling to France for 1 week in October to meet their team and create a foundation for their project, students will return to the US to conduct market research, consider legal issues in creating a business, and look at financial strategy and expectations in working with a start-up. (No knowledge of the French language is needed.)

### BUS 352: International Entrepreneurial Exchange II

(1/2 Unit)
Prerequisite: BUS 351 or permission of instructor.
Students complete their work with graduate students attending a business school in France to theoretically create a service or product to launch in the United States. The French members will travel to Albion in April and the teams will present their business plans during the Elkin Isaac Honors Symposium. (No knowledge of the French language is needed.)

### BUS 387: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### BUS 388: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### BUS 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### BUS 391: Internships

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

### BUS 392: Internships

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

### BUS 401: Seminar

(1/2 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
*Staff.*

### BUS 402: Seminar

(1 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
*Staff.*

## Chemistry

### CHEM 101: Chemistry That Matters

(1 Unit)
As citizens and consumers, we face the question of how we can live responsibly and safely in an environment in which we are literally surrounded by synthetic chemicals. For that reason, chemistry does matter to all of us. This course is concerned with materials which we encounter every day, including foods and food additives, cleaning supplies, fuels, building supplies, pesticides and radioactive materials (e.g., radon). The emphasis is upon what these materials are, how they work, how they can be used safely, and what their impact is on the environment. Chemical principles are introduced as needed. Hands-on microscale demonstrations are used frequently in the classroom. Non-laboratory. Lecture and discussion. Intended for non-science majors. *Staff.*

## CHEM 107: Chemistry for the Non-Science Major

(1 Unit)
An introduction to the methodology of science and the basic principles of chemistry. General chemistry, organic chemistry and biochemistry topics are briefly surveyed. Few mathematical skills are required. Lecture and laboratory. Not intended for the chemistry or science major. *Staff.*

## CHEM 152: Principles of Chemistry

(1 Unit)
Basic principles of stoichiometry, atomic and molecular structure, equilibrium, thermodynamics and kinetics. Thematic content will be used to explain how the foundational principles of chemistry can be used to explain the world around us. Topical applications and issues will vary with instructor. *Bieler, Harris, Lewis, McCaffrey, Metz, Rohlman, Streu.*

## CHEM 154: Organic Structure and Reactivity

(1 Unit)
Prerequisite: CHEM 152
This course builds on the atomic and molecular foundation developed in CHEM 152. Student are introduced to reactivity and mechanistic details of organic acid/base chemistry as well as model organic reactions. Quantitative reaction concepts necessary for organic chemistry are emphasized including: stoichiometry, thermochemistry, kinetic theory, thermodynamics, and dynamic equilibrium. Lecture and laboratory. *Harris, McCaffrey, Streu*

## CHEM 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## CHEM 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## CHEM 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## CHEM 200: Chemistry and Social Problems

(1 Unit)
Prerequisite: Junior/senior standing.
An examination of selected, important social problems which have a technological basis. Discussions focus upon the economic, political and ethical dimensions of the problems, as well as the science and technology involved, and include problems such as the greenhouse effect and global warming, chlorofluorocarbons and the stratospheric ozone layer, chemical and radioactive waste disposal, and the use of pesticides. Risk/benefit analysis and the connection between chemical exposure and biological harm are important features of the discussions. Laboratory work involves the analysis of water samples for trace metals and organic contaminants, using state of the art instrumentation, and will include attempts to assess the validity of the analytical results. Intended for non-science majors as well as science majors. *Lewis.*

## CHEM 206: Chemical Analysis

(1 Unit)
Prerequisites: CHEM 152 or CHEM 154 .
Laboratory course emphasizing the collection, analysis and interpretation of quantitative data, using both traditional and instrumental techniques. *Bieler, Lewis, Metz.*

## CHEM 212: Organic Reactions and Mechanism

(1 Unit)
Prerequisite: CHEM 154.
A continued survey of the mechanisms and reactions of organic molecules focusing on aromatic and carbonyl compounds, and the application of organic reactions toward organic synthesis. Laboratory involves team-designed organic syntheses of biologically relevant molecules and/or synthetic methodology. *Harris, McCaffrey.*

## CHEM 214: Inorganic Chemistry

(1 Unit)
Prerequisite: CHEM 154
A systematic introduction to the study of the synthesis, reactions, structures and properties of compounds of the elements. Topics include bonding theories, acid-base chemistry, oxidation and reduction chemistry, coordination chemistry and the applications and reactions of these complexes, and solid state chemistry. Lecture and laboratory *Bieler, Lewis, McCaffrey, Metz*

## CHEM 278: Biochemistry/Chemistry Research

(.25 Units)
Must have selected a reserch advisor and project before beginning this course.
This is an introduction to laboratory-based scholarship in the chemical sciences. Students will participate in a weekly seminar, where they will learn how to navigate and read chemical literature, how to prepare and deliver research-based presentations, and how to prepare posters to present research results. In addition to this seminar, students will also work in at least one afternoon a week in a research laboratory. *Staff.*

## CHEM 279: Biochemisty/Chemistry Research

(.5 Unit)
Must have selected a research advisor and project before beginning this course.
This is an introduction to laboratory-based scholarship in the chemical sciences. Students will participate in a weekly seminar, where they will learn how to navigate and read chemical literature, how to prepare and deliver research-based

presentations, and how to prepare posters to present research results. In addition to this seminar, students will also typically work two afternoon per week in a research laboratory. *Staff.*

## CHEM 287: Selected Topics

(1/4 Unit)
Prerequisite: CHEM 121 .
An examination of subjects or areas not included in other courses. *Staff.*

## CHEM 288: Selected Topics

(1/2 Unit)
Prerequisite: CHEM 121 .
An examination of subjects or areas not included in other courses. *Staff.*

## CHEM 289: Selected Topics

(1 Unit)
Prerequisite: CHEM 121 .
An examination of subjects or areas not included in other courses. *Staff.*

## CHEM 301: Chemical Energetics and Kinetics

(1 Unit)
Prerequisites: CHEM 206, CHEM 212 or CHEM 214 and MATH 141 or equivalent.
An exploration of the basic thermodynamic and kinetic principles that govern the outcome of all chemical reactions and physical processes. Primary emphasis is placed upon macroscopic chemical thermodynamics with applications to solutions, colligative properties and phase equilibria. Additional topics include kinetic molecular theory; the experimental basis for determining reaction rates, rate laws and rate constants; the relationship of rate laws to reaction mechanisms; and the effect of temperature change on the rate constant. *Bieler, Lewis.*

## CHEM 321: Advanced Synthesis Laboratory

(1 Unit)
Prerequisites: CHEM 206 and CHEM 212 or CHEM 214.
An exploration of advanced methods of chemical synthesis techniques in both organic and inorganic chemistry. Emphasis is placed on analysis of the synthetic products for purity and qualitative identification, using FT-NMR, FTIR, ultraviolet and visible spectroscopy. Further identification and analysis is done using GC/MS, and LC/MS. *Harris, McCaffrey.*

## CHEM 323: Advanced Laboratory: Biochemistry

(1 Unit)
Prerequisites: CHEM 206, CHEM 337.
The study of biochemical laboratory techniques, including enzyme purification and kinetics; gel exclusion, ion exchange; agarose gel electrophoresis; isolation of nucleic acids; and a special student-designed project. *Rohlman, Streu.*

## CHEM 327: Advanced Physical and Analytical Chemistry Laboratory

(1 Unit)
Prerequisite: CHEM 206 and CHEM 301. Prerequisite or corequisite: CHEM 340.
An exploration of various areas of physical chemistry and advanced problems in analytical chemistry including thermodynamics, kinetics, spectroscopy, x-ray diffraction and quantum mechanics. In carrying out these experiments, students use UV/Vis, fluorescence, ICP, IR, and x-ray fluorescence spectrometers and gain experience with electroanalytical methods, vacuum lines, lasers and x-ray diffraction. Two four-hour laboratories per week. *Bieler, Lewis, Metz.*

## CHEM 337: Biochemistry

(1 Unit)
Prerequisite: CHEM 212.
An in-depth study of biochemical structure, catalysis, metabolism and cellular regulation. Understanding living systems through molecular and chemical models. Areas of emphasis include macromolecular structure, enzyme mechanisms and kinetics, metabolic mechanisms and regulation, genomics, and proteomics. Same as BIOL 337. *Rohlman, Streu.*

## CHEM 340: Quantum Chemistry

(1 Unit)
Prerequisite: Permission of instructor.
Normally a student is expected to have completed CHEM 121 , CHEM 123 , CHEM 211 , CHEM 212, CHEM 206 and CHEM 301 as well as two units of calculus and two units of physics. The microscopic or molecular basis for chemistry. Among the topics covered are the use of Schrodinger wave mechanics to examine the energies of atoms and molecules, including structure and chemical bonds; comparison of calculated energies with experimental values obtained from atomic and molecular spectroscopy; and the use of statistical mechanics to calculate thermodynamic variables and equilibrium constants. *Bieler, Lewis.*

## CHEM 350: Advanced Organic Chemistry

(1/2 Unit)
Prerequisites: CHEM 154, CHEM 212.
Reinforces and extends the concepts introduced in CHEM 154, CHEM 212 and introduces new concepts, reactions and molecular theories. Taught with one of two emphases: (1) the synthetic course extends understanding of organic reactions, introduces the most current synthetic organic methods and asks students to use their knowledge to propose syntheses of complex molecules; (2) the physical/mechanistic course includes topics such as aromaticity and models used to explain thermal and photochemical concerted reactions such as frontier orbital theory, Huckel-Mobius transition state theory and the conservation of orbital symmetry. Students in both courses are taught to read and understand the chemical literature, then write about and orally present the novel chemistry they have learned. *Harris, McCaffrey.*

## CHEM 351: Biophysical Chemistry

(1 Unit)
Prerequisites: CHEM 301, CHEM 337.
Examination of the physical chemistry of macromolecules in living systems. A study of thermodynamics, kinetics, ligand binding and spectroscopy related to the understanding of macromolecular structure and function. *Rohlman, Streu*

## CHEM 352: Medicinal Chemistry

(1 Unit)
Prerequisite:  CHEM 337

This course is designed for upper-level science students with an interest in drug design. Lecture topics will include the common classes of drug targets, pharmacodynamics and pharmacokinetics, drug design and development, chemical approaches to drug discovery, specific medicinal chemistry approaches to antimicrobials, chemotherapeutics, analgesics, and drugs targeting the nervous system. Historical as well as current literature will be presented in both lecture and discussion formats. Students will be expected to become familiar with reading and understanding primary research papers in medicinal chemistry. *Streu.*

## CHEM 353: Spectroscopy

(1/2 Unit)
Prerequisite: CHEM 340.
General principles and theories of light absorption and emission at the molecular level, including the application of symmetry and group theory. Detailed applications to IR, Raman, microwave, UV-visible and radiofrequency spectroscopy (NMR, EPR). Additional topics chosen from X-ray crystallography, mass spectroscopy, photochemistry and Mossbauer spectroscopy. *Bieler, Lewis, Metz.*

## CHEM 356: Advanced Inorganic Chemistry

(1/2 Unit)
Prerequisite: CHEM 214.
An advanced-level discussion of periodic properties, chemical bonding, and acidbase concepts with an emphasis upon the bonding and properties of transition metal complexes. *McCaffrey, Metz.*

## CHEM 378: Biochemistry/Chemistry Research

(.25 Unit)
Must have selected a research advisor and project before beginning this course.
Laboratory-based scholarship in the chemical sciences for intermediate to advanced students. Students will participate in a weekly seminar, where they will learn how to navigate and read chemical literature, how to prepare and deliver research-based presentations, and how to prepare posters to present research results. In addition to this seminar, students will also typically work one afternoon a week in research laboratories. *Staff.*

## CHEM 379: Biochemistry/Chemistry Research

(.5 Unit)
Must have selected a research advisor and project before beginning this course.
Laboratory-based scholarship in the chemical sciences for intermediate to advanced students. Students will participate in a weekly seminar, where they will learn how to navigate and read chemical literature, how to prepare and deliver research-based presentations, and how to prepare posters to present research results. In addition to this seminar, students will also typically work two or more afternoons a week in research laboratories. *Staff.*

## CHEM 387: Selected Topics

(1/4 Unit)
Prerequisite: CHEM 121 .
An examination of subjects or areas not included in other courses. *Staff.*

## CHEM 388: Selected Topics

(1/2 Unit)
Prerequisite: CHEM 121 .
An examination of subjects or areas not included in other courses. *Staff.*

### CHEM 389: Selected Topics

(1 Unit)
Prerequisite: CHEM 121 .
An examination of subjects or areas not included in other courses. *Staff.*

### CHEM 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

### CHEM 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

### CHEM 401: Seminar

(1/2 Unit)
*Staff.*

### CHEM 402: Seminar

(1 Unit)
*Staff.*

### CHEM 411: Directed Study

(1/2 Unit)
*Staff.*

### CHEM 412: Directed Study

(1 Unit)
*Staff.*

## Communication Studies

### COMM 101: Introduction to Human Communication

(1 Unit)
An introduction to the study of communication. Students investigate communication theory, models, symbols and signs, verbal and nonverbal communication, interpersonal communication, group communication, organizational communication, mass communication, communication ethics and new communication technologies. *Staff.*

## COMM 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## COMM 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## COMM 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## COMM 202: Communication in Interpersonal Contexts

(1 Unit)
The course examines the theory and research behind interpersonal communication. Explores communication processes in dyads, families, teams, and in organizational settings. Teaches skills to improve students' communication competence in both personal and professional environments. The course also covers self-awareness, self-disclosure, relational development, and conflict resolution. *Erlandson.*

## COMM 205: Mass Communication

(1 Unit)
An introduction to the different modes of mass communication--from the printing press to the Internet--from historical and cultural perspectives in order to understand the impact of mass communication on society. Topics include mass communication's production and reproduction of cultural mores and values, and the controversy surrounding media "effects." *Staff.*

## COMM 206: Event Marketing & Management

(1 Uint)
Event Management is a theoretical and practical study of events. While interdisciplinary in nature, event planning theories covered in this class will be within the framework of strategic communication. Students will learn the art of event planning through the creation and implementation of an event outline. Students will utilize qualitative and quantitative data in event evaluation. This class will contain an overview of a multitude of events, including nonprofit fundraisers, weddings, community events, corporate engagements, and private parties.

## COMM 207: Communicating Gender

(1 Unit)
An exploration of the ways in which gender and communication interact. Students are introduced to research in the field and observe and analyze the ways in which our cultural construction of gender impacts on how we communicate and judge the communication of others. *Erlandson, Staff.*

## COMM 208: Health Communication

(1 Unit)
Health communication is a rapidly growing field in the discipline because of its potential to aid in understanding and influencing outcomes in a variety of interpersonal, organizational, and mass communication contexts. Communication is the key to disease prevention, health promotion, and behavior change. This course will introduce you to the exciting and increasingly important topics in the health communication field.

## COMM 209: Sport Communication

(1 Unit)
An examination of the role of communication in sports contexts. Students investigate communication theory and models and consider how communication in sports functions within a contemporary culture. Includes exploration of the media environment as well as culture in and around sport. *Boyan.*

## COMM 211: Risk Communication

(1 Unit)
This course is an introduction to risk communication, giving a communication research perspective to wide-ranging applications of individuals' risk perception and decision-making. Although a good amount of the course draws examples from health and medicine, we take a broader view of risk and behavior that should be interesting for students of any background. Specific topics will include the psychology behind risk-taking, public service communication about health and environmental catastrophes, crisis communication and public relations, and how gain-loss framing affects financially risky decisions.

## COMM 213: Intercultural Communication

(1 Unit)
An exploration of the role communication plays in defining and sustaining culture both globally and locally. By applying current research and theories in intercultural communication, students are introduced to major topics pertaining to communication between cultures. Topics include, but are not limited to: the way a culture's deep meaning structure impacts the way people communicate, culture-specific verbal and nonverbal norms, advice on verbal and nonverbal behavior when doing business internationally, adjusting to culture shock and exploring various subcultures in the United States. *Erlandson.*

## COMM 215: Social Media

(1 Unit)
An Examination of social media and the role in communication today. Students investigate social media elements, media and interpersonal communication theories, communication stratigies, and socio-cultural implications of social media. Topics include social media production and reproduction of cultural mores and values, consumption patterns of social media content, and implication of McLuhan's "the medium is the message" perspective.

## COMM 241: Public Speaking

(1 Unit)
A theoretical and practical study of speaking in public. Students are introduced to classical and contemporary critical standards of excellence in oral style and delivery, while they develop skills in the art of speaking effectively in informational and persuasive situations. *Staff.*

## COMM 242: Professional Communication

(1 Unit)
Prerequisite: For students in the Carl A. Gerstacker Institute for Business and Management, or permission of instructor. Focuses on individual communication skills that enhance professional and career development, including skills needed in the business world. Develops writing skills, presentation skills, and the ability to communicate and work with others. *Erlandson, Staff.*

## COMM 287: Selected Topics

(1/4 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## COMM 288: Selected Topics

(1/2 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## COMM 289: Selected Topics

(1 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## COMM 300: Communication Research Methods

(1 Unit)
Prerequisites: COMM 101 and at least one 200-level communication studies course.
Provides an overview of the concepts and tools by which communication research is designed, conducted, interpreted, and critically evaluated. Aims to help students become knowledgeable consumers and producers of quantitative and qualitative communication research. *Hill.*

## COMM 303: Communications in Sports Organizations

(1 Unit)
Provides an understanding of organizational communication theories and practices as they relate to the creation, maintenance, and change of culture and practices in sports organizations. This course will examine the impact of internal and external communication environments and how sports organizations adapt their communication and culture in response. Students will practice application, analysis, and critical thinking about communication in sports organizations through research projects. *Staff.*

## COMM 306: Public Relations

(1 Unit)
A theoretical and practical examination of the public relations field, including internal and external communications as well as media relations. Students occasionally gain practical experience by participating in a major campaign. *Staff.*

## COMM 308: Heath Disparities

(1 Unit)
Understanding and recognizing the preventable differences in health as well as health care is inherent in working toward reducing and eliminating the inequality experienced by so many due to their race, gender, age, religion, language, sexual orientation, mental and physical ability, socio-economic status, and geography. This course will cover the historical, cultural, and current issues facing these groups through a social ecological perspective that highlights the importance of communication in not only perpetrating and reinforcing these health inequalities but also in alleviating them.

## COMM 309: Sports Marketing

(1Units)
This course will examine the history and contemporary application of sports marketing as a method to achieve goals. Emphasis will be given to how sports teams use sports marketing strategies, including marketing research, market segmentation, branding, sponsorships, licensing, global sports marketing, and public relations to achieve business objectives aimed at specific constituencies, including consumers, employees, and athletes.

## COMM 310: Health Communication

(1 unit)
Health communication is a growing field of research because of its potential to aid in understanding and influencing health outcomes in a variety of interpersonal, organizational, and mass communication contexts. Communication is the key to prevention, promotion, and chance. This course will introduce you to the exciting and important theory and research being developed in the health communication discipline. *Price*

## COMM 311: Environmental Communication

(1 Unit)
Prerequisite: COMM 101
A study of how the natural environment is socially constructed through its representation in word and image. After introducing students to fundamental environmental terminology, the course will consider a number of key environmental communicators, their ideological positions, and how they shape their messages. This will be followed by a discussion of audiences and environmental communication ethics. Offered occasionally. *Staff.*

## COMM 312: Political Communication

(1 Unit)
Prerequisites: COMM 101 and at least one 200-level course, or permission of instructor.
By focusing on the interaction between media, politics, and public opinion, the course provides a survey of the field of political communication, with special attention paid to the role of political communication in democratic society, the audiences for political communication, what it means to be a citizen of the United States today, the effects of media on citizens' engagement with politics, and the interaction of politics and popular culture. *Hill.*

## COMM 330: Advertising

(1 Unit)

## COMM 351: Persuasion

(1 Unit)
A theoretical analysis of the process of influencing belief, attitude or behavior through appeals to reason, emotion and ethos. Students investigate experimental and rhetorical theories in the field and the ethical considerations of persuasion. *Staff.*

## COMM 387: Selected Topics

(1/4 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## COMM 388: Selected Topics

(1/2 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## COMM 389: Selected Topics

(1 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## COMM 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

## COMM 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

## COMM 401: Seminar

(1/2 Unit)
Prerequisite: Junior or senior standing and permission of instructor.
A detailed study of significant and relevant problems in communication studies. Specific topic for consideration will be determined before registration. *Staff.*

## COMM 402: Seminar

(1 Unit)
Prerequisite: Junior or senior standing and permission of instructor.
A detailed study of significant and relevant problems in communication studies. Specific topic for consideration will be determined before registration. *Staff.*

## COMM 411: Directed Study

(1/2 Unit)
*Staff.*

### COMM 412: Directed Study

(1 Unit)
*Staff.*

## Computer Science

The Department of Mathematics and Computer Science reserves the right to deny enrollment to students taking courses out of sequence as determined by prerequisites.

### CS 151: Information Technology

(1 Unit)
Intended for the liberal arts student who wants to understand and better use information technology. Topics include how computers work, the Internet and World Wide Web, new trends in computing such as mobile computing and peer-to-peer networks, how software development differs from traditional manufacturing, how computing is changing our culture and laws, current trends in computer crime, security, and privacy. Additional topics are drawn from current events and issues. Does not count toward the computer science major or minor. Laboratory. Does not count toward the computer science major or minor. *Staff.*

### CS 171: Introduction to Computer Science I

(1 Unit)
Prerequisite: MATH 125 (or equivalent) or permission of instructor.
Designed to be the first computer science course taken by students in mathematics and computer science. Topics include fundamentals of computation and algorithmic problem-solving, data types, control structures, the object-oriented programming paradigm and applications. Introduces a high-level programming language such as Java or Python. *Reimann.*

### CS 172: Accelerated Introduction to Computer Programming

(1/2 Unit)
Prerequisite: Permission of instructor.
Intended for students receiving AP or transfer credit for CS 171. It is recommended that such students take this course prior to enrolling in additional computer science courses. An overview of programming in the same high-level language used in CS 171. *Reimann.*

### CS 173: Introduction to Computer Science II

(1 Unit)
Prerequisite: CS 171.
A continuation of CS 171. Emphasizes advanced object-oriented programming (interfaces, multiple inheritance, reflections), abstract data types (stacks, queues, lists, strings, trees, graphics, etc.) and analysis of algorithms. Other topics include recursion, searching and sorting, simulation and an introduction to some of the advanced areas of computer science, e.g., computer organization, artificial intelligence and user interfaces. Students refine their programming skills in a high-level programming language such as Java or Python. Laboratory. *Reimann.*

## CS 256: Practicum in Programming Languages

(1/4 Unit)
Prerequisite: CS 171 or permission of instructor.
Designed to teach an additional computer language beyond those currently used in the computer science courses. Emphasizes writing and debugging programs that use the special features of the language. FORTRAN and C are the languages that have been taught most recently. Special sections of this course have been offered that are devoted to developing problem-solving skills in computer programming. *Staff.*

## CS 261: Computers, the User and Society

(1 Unit)
Prerequisite: CS 171.
An examination of how computers are used and how computers fit into society. Topics include user interface design, human-centered software development and evaluation, software reliability, social context of computers, professional and ethical responsibilities for technology professionals, intellectual property rights, privacy and civil liberties, computer crime. Offered every third year. Offered every third year. *Reimann, Staff.*

## CS 263: Operating Systems and Networks

(1 Unit)
Prerequisite: CS 173.
The role of operating systems, concurrency and deadlock avoidance, memory management, client-server models, device management, networking, LANs and WANs, TCP/IP, network architectures, security, trends in networks such as wireless networks and the Internet. Offered every third year. Offered every third year. *Reimann.*

## CS 265: Database Programming

(1 Unit)
Prerequisites: CS 173 and MATH 239.
Fundamental concepts of database management systems: the relational data model, relational algebra, and normal forms, file organization and index structures, and the query language SQL and embedded SQL. Offered every third year. *Reimann, Staff.*

## CS 271: Artificial Intelligence

(1 Unit)
Prerequisites: MATH 239 and CS 173.
Basic techniques of artificial intelligence including knowledge representation and reasoning, problem-solving and planning, game playing, and learning. Covers AI programming and languages. Offered every third year. *Staff.*

## CS 273: Computer Graphics and Image Processing

(1 Unit)
Prerequisites: CS 173 and Mathematics 236 or MATH 247.
A unified introduction to image synthesis and image analysis aimed at students with an interest in computer graphics, computer vision or the visual arts. Covers the basics of image generation, image manipulation and digital special effects. Includes a significant programming project using the OpenGL programming interface. Offered every third year. *Reimann.*

## CS 275: Software Development

(1 Unit)
Prerequisite: CS 173.
An introduction to the techniques of developing large software projects including unit testing, version control and build management. Covers the popular industrial languages C and C++ and includes a large-group programming project. Offered every third year. *Reimann, Staff.*

## CS 277: Machine Learning

1 unit
Prerequisites: CS 173 and MATH 239 .
In this course the differences between problems of regression and classification will be stated. The Gradient Descent algorithm will be studies in detail, so its process and parameters can be adjusted properly. The idea behind supervised and unsupervised learning will also be explored and some algorithms in both paradigms will be studied such as decision trees, neural networks, clustering algorithms, and SVMs. At the end a new topic in machine learning, algorithms for explanations, will be presented and discussed. All algorithms studied in the course will have a small project implementation and application. *Staff*

## CS 316: Numerical Analysis

(1 Unit)
Prerequisites: MATH 247 and CS 171.
Methods of obtaining numerical solutions to mathematical problems. Stresses the implementation and error analysis of algorithms. Topics include solution of non-linear equations, systems of equations, interpolating polynomials, numerical integration and differentiation, numerical solutions to ordinary differential equations, and curve fitting. Offered in alternate years. Same as MATH 316. *Mason.*

## CS 326: Operations Research

(1 Unit)
Prerequisites: MATH 247.
An introduction to computational methods in mathematical modeling including linear programming and Markov chains. Applications in business, economics and systems engineering. Knowledge of probability is helpful. Offered in alternate years. Same as MATH 326. *Mason.*

## CS 352: Algorithms

(1 Unit)
Prerequisites: MATH 239 and CS 171.
Focuses on the design and efficiency of algorithms. Covers the basic algorithm paradigms including graph traversals, greedy algorithms, divide and conquer, dynamic programming and flow algorithms. Introduces complexity theory, NP-completeness and polynomial-time reductions. Additional topics may include approximation algorithms, randomized algorithms and linear programming. Offered in alternate years. *Reimann.*

## CS 354: Computer Organization

(1 Unit)
Prerequisite: CS 173.
Organization of digital computers: digital logic, arithmetic, assembly language, data paths, memory, input-output,

secondary storage devices, multiprocessors and computer performance. Programming tools and techniques are also discussed with emphasis on their application in assembly language. Offered in alternate years. *Reimann.*

### CS 356: Programming Languages

(1 Unit)
Prerequisite: CS 173.
A survey of the structure of programming languages and programming as an abstract concept. Topics include syntax and semantics, scope rules, environments, types, procedures, parameters, overloading, parametric polymorphism and inheritance. Projects include programming in the functional paradigm using the Scheme programming language and development of a language interpreter. Offered in alternate years. *Reimann.*

### CS 358: Foundations of Computing

(1 Unit)
Prerequisites: MATH 239 and CS 171.
The theoretical underpinnings of computer science: models of computation including automata, Turing machines, circuits, the Chomsky language hierarchy, Church's thesis, computable and noncomputable functions, recursive and recursively enumerable sets, reducibility and introduction to complexity theory. *Jordon.*

### CS 360: Mathematical Modeling

(1 Unit)
Prerequisites: MATH 247 and CS 171.
An introduction to analytical methods in mathematical modeling including nonlinear optimization, dynamical systems and random processes. Applications in physics, biology, economics and systems engineering. Knowledge of probability and statistics will be helpful Same as MATH 360. *Mason.*

## Computer Science: Special Studies

### CS 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### CS 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### CS 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### CS 287: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff*

## CS 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff*

## CS 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff*

## CS 299: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisite: MATH 143 or CS 173.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation and a paper on a mathematics/computer science topic of personal interest. Same as MATH 299. *Staff.*

## CS 387: Selected Topics

(1/4 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## CS 388: Selected Topics

(1/2 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## CS 389: Selected Topics

(1 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## CS 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

## CS 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

## CS 399: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisites: CS 299 and senior standing.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation, a departmental major assessment examination and an oral presentation on a mathematics/computer science topic of personal interest. Offered only on a credit/no credit basis. Same as MATH 399. *Staff.*

### CS 401: Seminar

(1/2 Unit)
A detailed study of significant and relevant problems in communication studies. Specific topic for consideration will be determined before registration. *Staff.*

### CS 402: Seminar

(1 Unit)
A detailed study of significant and relevant problems in communication studies. Specific topic for consideration will be determined before registration. *Staff.*

### CS 411: Directed Study

(1/2 Unit)
*Staff.*

### CS 412: Directed Study

(1 Unit)
*Staff.*

## Economics and Management

The following courses are offered without specific course prerequisites for interested liberal arts students: E&M 101: Principles of Microeconomics; E&M 102: The Economy and Financial Markets; E&M 211: Financial Accounting; E&M 259: Managing People and Organizations; E&M 351: Women in Business and Leadership; E&M 371: Issues in Modern Political Economy; ; E&M 350: Business Law; E&M 353: Labor Law, Unions and Management; E&M 355: Human Resource Management; E&M 358: Management Consulting; E&M 359: Management; E&M 362: International Management; and E&M 352: Negotiation and Dispute Resolution.

### AEXL 296: AC Community Collaborative

(1 Unit)
Prerequisites: Two semesters of full-time collegiate course work beyond high school; application process
Students are introduced to the field of management consulting and the consulting process; Also addressed are the importance of and skill development in professionalism, impact measurement, team problem solving, and the basics of innovation design. Students work as junior consultants, guided by a "Learning by Doing" framework, on teams under the guidance of the AC3 Director, and senior (student) consultants and team leaders. *Baker*

### AEXL 396: AC Community Collaborative

(1 Unit)

Prerequisites: AEXL296, application process
Students advance their skills in consulting, professional meeting facilitation, presentations, project scoping and MOU design, discovery process, project management, team management, change management, and other skills. In addition, students conduct course-based undergraduate research as they explore industry best practices (primary and secondary data collection). While serving as senior consultants, students in 396 are guided by a "Learning Through Doing and Mentoring" framework. *Baker*

## AEXL 496: AC Community Collaborative

(1 Unit)
Prerequisites: AEXL296, AEXL396, application process
Enrolled students serve as project team leaders and are the guarantor of high-quality client relations and deliverables. Through a "Learning Through Leadership" framework, students advance leadership skills, resource allocation and project planning for on time quality delivery. Students serve as trainers to incoming junior consultants. Pending active client projects at the time of enrollment, students at the 496 level may also work directly with the Director to procure additional clients and/or help teams of students scope other client project work. *Baker*

## E&M 101: Principles of Microeconomics

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the principles of decision-making by households and businesses. Supply and demand; the impact of prices and costs on market behavior; and public policies related to taxation, the environment, the labor market, and international trade. *Hooks, Jaqua, Li, Saltzman.*

## E&M 102: The Economy and Financial Markets

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the macroeconomy and macroeconomic models with special emphasis on the role of financial markets, interest rates, the Federal Reserve, monetary and fiscal policy, and money and capital markets. *Hooks, Li.*

## E&M 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## E&M 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## E&M 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## E&M 200: Economic Statistics

(1 Unit)
Prerequisite: Math 120 or demonstrated proficiency, MATH 125, or MATH 141.
A first course in statistics with emphasis on regression analysis and its applications in economics and management. Not open to students who have taken MATH 209 or MATH 309. *Jaqua.*

## E&M 201: Intermediate Microeconomics

(1 Unit)
Prerequisites: E&M 101: and MATH 120 or demonstrated proficiency, MATH 125, or MATH 141.
Theoretical analysis of consumer choice theory and demand, production and cost, the firm and market organization, distribution and general equilibrium, game theory. *Jaqua.*

## E&M 202: Intermediate Macroeconomics

(1 Unit)
Prerequisites: E&M 101; E&M 102; and MATH 120 ro demonstrated proficiency, MATH 125, or MATH 141.
The development of macroeconomic theory and its application to government policy toward unemployment, inflation and growth. *Hooks, Li.*

## E&M 209: Intermediate Microeconomics with Calculus

(1 Unit)
Prerequisite: E&M 101 and MATH 141 or permission of instructor.
A more rigorous version of E&M 201 for students pursuing the mathematics/economics major and for others with the necessary math background by permission. Not offered every year. *Jaqua.*

## E&M 211: Financial Accounting

(1 Unit)
Prerequisite: MATH 100 with a grade of 2.0 or higher or placement into MATH 120 or higher.
Introduction to the world of business and accounting. Emphasis on understanding the concepts of net income, cash flow and financial condition. Communication of economic results through financial statements and reports. Development of analytical skills used in evaluating business success. Not open to first-year students. *Bedient, Carlson.*

## E&M 212: Managerial and Cost Accounting

(1 Unit)
Prerequisite: E&M 211 or permission of instructor.
Development and use of accounting information for effective managerial control and decision-making within a complex organization. Topics include cost behavior, profit planning, cost accounting (including job order, process and activity-based), just-in-time inventory control, standard costs and budgetary control. *Bedient, Carlson.*

## E&M 220: Marketing Principles

(1 Unit)
Prerequisite: E&M 101 . PSYC 101 recommended.
An introduction to the role that product, price, promotion, and distribution play in marketing strategy and implementation. Addresses buyer behavior, market segmentation, and competititve positioning. Provides background needed for all 300-level marketing courses. *Yayla*

## E&M 248: Financial Modeling with Excel

(1 Unit)
Introduction to Excel and the application of Excel to finance. Includes use of Excel to model various financial concepts and apply these concepts to real world situations. *Bedient, Hooks.*

## E&M 259: Managing People and Organizations

(1 Unit)
Prerequisite: Sophomore standing.
An introduction to organizational behavior, including analysis at the level of the individual group or team, and organization. Topics addressed include employee attitudes and job satisfaction, managerial decision making and problem solving, managing teams, conflict and negotiation, leadership, and organizational culture and design. *Baker, staff.*

## E&M 273: Environmental and Natural Resource Economics

(1 Unit)
Prerequisite: E&M 101.
Economic theory is used to examine environmental and natural resource problems and policies. *Staff.*

## E&M 287: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## E&M 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## E&M 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## E&M 300: Econometrics

(1 Unit)
Prerequisite: One of the following: MATH 209, MATH 309, or E&M 200.
An introduction to empirical work in economics and management. Topics covered include: hypothesis testing, estimation, correlation, and regression and related problems. Students use statistical software to access data sources and to write an empirical paper. Topics covered include: hypothesis Not offered every year. *Jaqua*.

## E&M 309: Mathematical Economics

(1 Unit)
Prerequisites: E&M 201and at least one course in calculus.
Optimization and economic analysis, game theory and financial economics. Not offered every year. *Jaqua.*

## E&M 310: Governmental and Not-for-Profit Accounting

(1/2 Unit)
Prerequisite: E&M 211.
E&M 311 recommended. An introduction to accounting and financial reporting for governmental entities and non-profit organizations. Covers state and local governments, colleges and 165 universities, health care entities, museums, libraries and performing arts organizations. *Bedient.*

## E&M 311: Intermediate Accounting I

(1 Unit)
Prerequisite: E&M 211.
Theory and practice underlying financial accounting measurement and reporting. Provides a detailed exploration of assets and their relationship to income determination. Includes coverage of generally accepted United States accounting principles (GAAP) and international financial reporting standards (IFRS). *Bedient, Carlson.*

## E&M 312: Intermediate Accounting II

(1 Unit)
Prerequisite: E&M 211.
Theory and practice underlying financial accounting measurement and reporting. Provides a detailed exploration of liabilities and stockholders' equity, and other selected topics including pensions, leases and the statement of cash flows. Includes coverage of generally accepted United States accounting principles (GAAP) and international financial reporting standards (IFRS). Usually taken after E&M 311. *Bedient, Carlson.*

## E&M 313: Federal Income Taxation

(1 Unit)
Prerequisite: E&M 311.
Comprehensive introduction to federal income taxation, particularly as it relates to individuals and businesses. Emphasis on the recognition of opportunities for effective tax planning and management. *Carlson.*

## E&M 314: Advanced Taxation and Corporate Transactions

(1 Unit)
Prerequisite: E&M 313.
A continuation of E&M 313. Taxation of corporations, partnerships, estates and trusts. Tax planning and management strategy aspects of corporate formation and reorganization. Students prepare and revise legal memoranda on tax issues. Students may not receive credit for both E&M 314 and E&M 315. *Carlson.*

## E&M 315: Advanced Taxation

(1/2 Unit)
Prerequisite: E&M 313.
A continuation of E&M 313. Introduction to the taxation of corporations, partnerships, estates, and trusts. Students may not receive credit for both E&M 314 and E&M 315. *Carlson.*

## E&M 316: Auditing

(1 Unit)
Prerequisites: E&M 311 or E&M 312.
Introduction to auditing concepts, objectives and standards; topics include professional ethics, types of audits (their purpose, scope, and methodology). EDP auditing, and statistical sampling. Reference will be made to authoritative auditing standards and pronouncements. *Bedient, Carlson.*

## E&M 317: Accounting Information Systems

(1/2 Unit)
Prerequisite: E&M 311.
Provides a basic knowledge of the components of an accounting information system and the controls required to operate it efficiently. Students receive hands-on experience with a computerized accounting system. *Bedient.*

## E&M 318: Accounting for Business Consolidations

(.5 Unit)
Prerequisite: E&M 312.
Theory and practice underlying the consolidation or diposition of multiple legal entities for accounting purposes. Covers the cost and equity methods fo accounting for investments, combinations, and consolidations. Includes coverage of generally accepted United States accounting principles (GAAP), international financial accounting standards (IFRS), and Internal Revenue Service (IRS) federal income tax rules and regulations. *Bedient, Carlson.*

## E&M 319: Integrated Financial Standards

.5
E&M 212 and E&M 311 or permission of instructor. E&M 312
This course revisits topics addressed in multiple accounting courses, with the aim of helping students to consolidate their knowledge and develop reliable intuitions based on underlying accounting principles. *Bedient, Carlson.*

## E&M 320: Consumer Behavior

(1 Unit)
E&M 220 and one of the following: COMM 101, PSYC 101
Applies psychology and economics to analyze how marketers create value for customers, what motivates shoppers to buy, and how consumers process information and make decisions. Also addresses persuasion techniques, cross-cultural influences on consumer behavior, and the impact of corporate reputation on consumer choice. *Yayla*

## E&M 321: Marketing Research

(1 Unit)
Prerequisites: E&M 220 ; E&M 200 OR MATH 209 OR BOTH PSYC 204 & PSYC 306
Use of marketing data to inform managerial decision-making. Topics include defining research objectives, data sources for marketing, exploratory research methods, survey research design, observational research techniques, experimental design, sampling procedures, data collection and analysis, and communicating research findings. Hands-on computer work is an important part of the course. *Yayla*

## E&M 324: International Marketing

(1 Unit)
Prerequisite: E&M 220

Marketing across national borders, marketing within foreign countries, and the coordination of global marketing. Emphasis on the management response to conditions that differ from those in domestic marketing, e.g., foreign cultures, nationalism, government policies, business institutions, and level of economic development. Not offered every year. *Yayla*

## E&M 325: Data-Driven Digital Marketing

(1 Unit)
E&M 220; E&M 200 OR MATH 209 OR MATH 309 OR BOTH PSYC 204 & 206
Overview of the rapidly changing field of digital marketing. Use of "big data" and machine learning to improve the effectiveness of digital marketing campaigns. Not offered every year. *Yayla*

## E&M 329: Marketing Strategy

(1 Unit)
Prerequisite: E&M 220. Additional prior courses in marketing are recommended.

Focuses on marketing's role in gaining a sustainable competitive advantage. Emphasis is on the application of key concepts learned in other courses to analyze case studies and participate in a marketing simulation game. Requires students to write case reports, work in groups, and make a project presentation. *Yayla*

## E&M 344: Portfolio Theory

(1 Unit)
Prerequisite: E&M 102.
An overview of the characteristics and analysis of individual security returns, and the theory and practice of optimally combining securities into portfolios. Examines the equilibrium pricing of securities in the context of the capital asset pricing model, and the risk/return relationship of both individual securities and portfolios, as well as the recent attack on the CAPM and the implications for efficient markets. Not offered every year. *Hooks.*

## E&M 345: Money and Banking

(1 Unit)
Prerequisite: E&M 102.
Focuses on the Federal Reserve and its attempts to promote maximum sustainable economic growth. Other topics include the nature of money, the determination of interest rates, the financial system and financial institution operations, the structure of the Federal Reserve and the macroeconomics of inflation and growth. *Hooks, Li.*

## E&M 346: Financial Markets

(1 Unit)
Prerequisite: E&M 102.
An examination of the way in which the market transfers resources from those with a surplus to those with a deficit. Students study both the theory of efficient transfer and the financial institutions and instruments which facilitate this transfer. Topics include the analysis of equity markets, fixed income markets and derivative markets. *Hooks.*

## E&M 348: Financial Management

(1 Unit)
Prerequisite: E&M 101.

A survey course covering principles of corporate financial management. Topics include working capital management, agency theory, capital budgeting, capital structure, divided policy, financial analysis and selected topics. *Hooks.*

## E&M 350: Business Law

(1 Unit)
Prerequisite: Junior or senior standing.
A case approach to the application of legal principles to business activity. Particular emphasis is placed upon the law of contracts, the Uniform Commercial Code, business organization, and federal regulation of the competitive process. Junior or senior standing is recommended. *Staff.*

## E&M 351: Women in Business and Leadership

(1 Unit)
Prerequisite: Junior or senior standing.
Historical and contemporary perspectives on the expanding role of women in leadership positions, both in business and in other realms, such as politics. Extensive classroom discussions and use of case studies. Issues addressed include equal pay, work-family balance, the "opt-out myth," challenges women face in various industries or occupations, and the role of corporations in hindering or supporting women's advancement. *Baker*.

## E&M 352: Negotiation and Dispute Resolution

(1 Unit)
Prerequisite: Junior or senior standing, or permission of instructor.
An introductory study of the theories and concepts related to negotiation and dispute resolution developed in such fields as microeconomics, psychology and industrial relations. Includes many role-playing exercises to provide students with practice in negotiation. *Saltzman.*

## E&M 353: Labor Law, Unions and Management

(1 Unit)
Prerequisite: Sophomore standing or permission of instructor.
Labor history, labor law, union-management relations, comparative labor movements. Student participation in a collective bargaining game. Not offered every year. *Saltzman.*

## E&M 355: Human Resource Management

(1 Unit)
Prerequisite: Junior or senior standing.
An overview of personnel management, with an emphasis on the needs of the general manager rather than the personnel specialist. Topics include employee motivation, job enrichment, labor relations, grievances and discipline, recruitment and selection, equal employment opportunity, performance appraisal, compensation and employee benefits. *Baker, Saltzman.*

## E&M 357: Business Functions

(1 Unit)
Prerequisite: Permission of instructor.
Selected topics in management, finance and marketing for students in the Management for the Professions Concentration. The course highlights fundamental concepts with particular attention to their interactions within the context of the management of an organization. *Bedient.*

## E&M 358: Management Consulting

(1 Unit)
Prerequisite: Junior or senior standing.
Prior courses related to management are recommended but not required. The role of management consultants in diagnosing organizational problems and developing action plans that can be effectively implemented. Students work on a team-based management consulting project for a community organization to gain "real world" experience and to develop interpersonal, communication and analytical skills. Teams address issues such as strategy, organizational structure, leadership development or process efficiency. Not offered every year. *Baker.*

## E&M 359: Management

(1 Unit)
Prerequisite: Junior or senior standing, or permission of instructor.
An introduction to current management theory and practice. Traditional managerial functions such as planning, organizing and controlling are studied and contrasted with newer cross-functional approaches. *Baker, Bedient.*

## E&M 362: International Management

(1 Unit)
Prerequisite: Junior or senior standing.
Cross-cultural, ethical and social issues related to doing business abroad. Corporate strategy and structure, communication, negotiation, human resources and marketing in multinational operations. Not offered every year. *Baker.*

## E&M 363: The Chinese Economy

(1 Unit)
Prerequisites: E&M 101, E&M 102.
An examination of economic policy and institutions in China since 1949. Topics include the Communist economic system adopted under Mao, the transition to a more market-oriented system beginning in 1978, sustainability of rapid economic growth, the banking and financial system, foreign trade and investment, labor market reforms, the social safety net, and rural economic development. *Li.*

## E&M 365: International Finance

(1 Unit)
Prerequisite: E&M 102.
International macroeconomics. Particular attention is paid to the relationship among exchange rates, balance of payments, international capital flows and macroeconomic equilibrium. Eurocurrency markets and alternative international monetary systems are also examined. Particular attention is paid to the relationship among exchange rates, balance of payments, international capital flows and macroeconomic equilibrium. *Li.*

## E&M 366: International Trade

(1 Unit)
Prerequisite: E&M 101.
International microeconomics. Study of models explaining trade patterns between countries. Analysis of industry-level trade policy issues including the effects of tariffs, quotas and other restrictions; international competition among large firms; technological change; and free trade areas. *Li.*

## E&M 371: Issues in Modern Political Economy

(1 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
A non-technical course on selected legal and public policy issues related to the economy. Topics vary from term to term but could include such issues as equal employment opportunity and affirmative action, the use of economic analysis in setting public policy, and government's role in health care. Not offered every year. *Saltzman.*

## E&M 372: Government Economics and Policy

(1 Unit)
Prerequisite: E&M 101.
Application of microeconomic analysis to expenditure and revenue decisions in the public sector, including rationale for government expenditures, criteria for revenue generation and the analysis of economic effects of major taxes. Not offered every year. *Hooks.*

## E&M 374: Labor Economics

(1 Unit)
Prerequisite: E&M 101.
An investigation of labor market decisions and outcomes; topics include labor supply and demand, earnings, discrimination and unemployment. Not offered every year. *Saltzman.*

## E&M 375: Health Economics

(1 Unit)
Prerequisite: E&M 101 or permission of instructor.
A microeconomic and institutional analysis of health care services in the U.S., with particular reference to issues of cost and access. Topics include the demand for medical care, health insurance, economic regulation of hospitals, the markets for physicians and medical education, and the political economy of health care. Not offered every year. *Saltzman.*

## E&M 387: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## E&M 388: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## E&M 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## E&M 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. Limited to one unit of credit in economics and management. *Staff.*

### E&M 392: Internship

(1 Unit)
Offered on a credit/no credit basis. Limited to one unit of credit in economics and management. *Staff.*

### E&M 401: Seminar E or M

(1/2 Unit)
Prerequisites: Junior or senior standing in economics and management and permission of the instructor. Seminars are offered in selected areas not normally part of the regular curriculum. *Staff.*

### E&M 402: Seminar E or M

(1 Unit)
Prerequisites: Junior or senior standing in economics and management and permission of the instructor. Seminars are offered in selected areas not normally part of the regular curriculum. *Staff.*

### E&M 411: Directed Study

(1/2 Unit)
Prerequisites: Junior or senior standing in economics and management and permission of instructor. *Staff.*

### E&M 412: Directed Study

(1 Unit)
Prerequisites: Junior or senior standing in economics and management and permission of instructor. *Staff.*

## Education

### EDUC 110: Exploring Teaching Colloquium

.25 unit
Exploration of educational careers and options for teacher certification. Students will document a minimum of ten hours of clinical experience observing in varied educational settings and grade levels. *Staff*

### EDUC 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### EDUC 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## EDUC 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## EDUC 195: Education Foundations: Access, Equity and Advocacy

1 Unit
Introductory course for students interested in exploring the field of education, TESL, and PK-12 education with teacher certification. An overview of the historical, social, political, multicultural, and philosophical foundations of education. Provides the larger conceptual perspectives necessary for studying teaching, learning and education and critically examines the power relationships among teachers, schools and society. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers PK-12, the Michigan Core Teaching Practice with explicit emphasis on building relationships and creating equitable learning environments for ethnolinguistically diverse students. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee. Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. *Staff*

## EDUC 196: Learner-Centered Approaches, Supports and Technologies

1 Unit
Prerequisites: EDUC 195 and a minimum cumulative GPA of 2.5.
Introductory course for students interested in PK-12 education with teacher certification. Emphasizes understanding and application of learner-centered approaches, supports and technologies as well as social-emotional learning. These are essential in understanding and supporting personal and professional growth, as well as in understanding diverse PK-12 learners and the development of the whole child. These will be explored in greater depth in all subsequent education courses. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for the Preparation of Teachers PK-12, Early Childhood Quality Standards, the Michigan Core Teaching Practices and special education. *Staff*

## EDUC 202: Foundational Contexts of Education

(1 Unit)
An overview of the historical, social, political, multicultural and philosophical foundations of education. Provides the larger conceptual perspectives necessary for studying teaching, learning and education, and critically examines the relationship among teachers, schools and society. Seminar and field practicum. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee. Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. *Henke, Shanton.*

## EDUC 203: Processes in Learning and Teaching

(1 Unit)
Prerequisites: EDUC 202 and a minimum cumulative GPA of 2.7.
Introductory course for students interested in teacher education. Emphasizes understanding and application of four processes: (1) observation, (2) inquiry, (3) reflection/assessment and (4) connection/creativity. These processes are essential in understanding and supporting personal and professional growth and in understanding teaching and learning in diverse K-12 classrooms. These processes, along with issues of personal and professional growth, will be explored in

greater depth in all subsequent education course work. Seminar and special education field practicum. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee. Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. *Shanton, Staff.*

## EDUC 240: Brass Instruments

(1/4 Unit)
Offered in alternate years. Same as MUS 240, 241. *Staff.*

## EDUC 241: Brass Instruments

(1/4 Unit)
Offered in alternate years. Same as MUS 240, 241. *Staff.*

## EDUC 242: Woodwind Instruments

(1/4 Unit)
Offered in alternate years. Same as MUS 242, 243. *Staff.*

## EDUC 243: Woodwind Instruments

(1/4 Unit)
Offered in alternate years. Same as MUS 242, 243. *Staff.*

## EDUC 244: Stringed Instruments

(1/4 Unit)
Offered in alternate years. Same as MUS 244, 245. *Staff.*

## EDUC 245: Stringed Instruments

(1/4 Unit)
Offered in alternate years. Same as MUS 244, 245. *Staff.*

## EDUC 246: Percussion Instruments

(1/4 Unit)
Same as MUS 246. *Staff.*

## EDUC 247: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of Elementary Social Studies

(1/2 Unit)
Supports elementary education students in developing pedagogical knowledge and skills through the exploration of professional and theoretical literature, projects and field-based teaching experiences. Required professional sequence course for all elementary education candidates in social studies. *Staff.*

## EDUC 248: Social Studies Pedagogy in Elementary Schools: Inquiry and Civic Engagement in a Diverse World

(.5 Unit)
Prerequisites: EDUC 195 , EDUC 196 and permission of the Education Department.
Supports elementary education students in developing pedagogical knowledge and skills through the exploration of professional and theoretical literature, projects and field-based teaching experiences. Required professional sequence course for all elementary education prospective teachers. Students will develop strategies for connecting the interrelated content in disciplines to the development of children as citizens of the world. A minimum of ten hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for the Preparation of Teachers PK-3, the Michigan Core Teaching Practices. *Staff.*

## EDUC 249: Social Studies Pedagogy in Elementary Schools: Inquiry and Civic Engagement in a Diverse World

1 Unit
Prerequisites: EDUC 195, EDUC 196 and permission of Education Department
Supports elementary education students in developing pedagogical knowledge and skills through the exploration of professional and theoretical literature, projects and field-based teaching experiences. Required professional sequence course for all elementary education prospective teachers. Students will develop strategies for connecting the interrelated content in disciplines to the development of children as citizens of the world. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for the Preparation of Teachers PK-3, the Michigan Core Teaching Practices. *Staff*

## EDUC 268: Science Pedagogy in Elementary Schools: Inquiry and Sustainability in a Diverse World

(.5 Unit)
Prerequisites: EDUC 195 , EDUC 196 and permission of Education Department.
Inquiry-oriented, project-based coursework of pedagogical content for education students in STEM fields to develop knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences working with 21st century skills and technology. Requires planning and preparation, engagement in classroom environments, instruction in classroom environments, and formative and summative reflection. A minimum of ten hours of clinical experience focuses on development in each of the domains of the Frameworks for Teaching, the Standards for the Preparation of Teachers PK-3, the Michigan Core Teaching Practices.

## EDUC 269: Science Pedagogy in Elementary Schools: Inquiry and Sustainability in a Diverse World

(1 Unit)
Prerequisites: EDUC 195, EDUC 196 and permission of department.
Inquiry-oriented, project-based coursework of pedagogical content for education students in STEM fields to develop knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences working with 21st century skills and technology. Requires planning and preparation, engagement in classroom environments, instruction in classroom environments, and formative and summative reflection. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers of Lower Elementary (PK-3) Education, and the Michigan Core Teaching Practices. *Staff.*

## EDUC 271: Literacy Pedagogy in Elementary Schools: Contexts, Motivation and Engagement

1 unit
Prerequisites: EDUC 195 , EDUC 196  and permission of department.
Examines relevant research base and theory on early literacy acquisition and learning contexts, motivation, engagement and assessments. Looks at culturally responsive pedagogy with children from a variety of cultural, economic, ethno-linguistic and racial backgrounds. Emphasizes the knowledge, practices, and strategies needed to address all of the constructs of literacy developing in an integrated manner and in the service of meaningful listening, speaking, reading, writing, viewing and visually representing. Requires planning and preparation, engagement in classroom environments, instruction in classroom environments, and formative and summative reflection. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers of Lower Elementary (PK-3) Education, Early Childhood Quality Standards, and the Michigan Core Teaching Practices. *Shanton, Staff.*

## EDUC 287: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## EDUC 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## EDUC 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## EDUC 300: Eligibility for Teacher Certification

.25 unit
Prerequisites: EDUC 195, 196 and permission of department.
Eligibility for teacher certification requires completion of many steps, including successful passage of Michigan Tests for Teacher Certification (American Council on the Teaching of Languages Oral Proficiency Interview also required for world language teachers). This course will provide students with the skills to take initiative in planning and accessing resources. Students may choose to take this course more than one time. *Staff*

## EDUC 303: Theory, Models & Policy in English as a Second Language

1 unit
Prerequisites: EDUC 195 and permission of department.
*Staff*

## EDUC 304: Assessment, Curriculum, and Standards in Teaching English as a Second Language

1 unit
Prerequisites: EDUC 195 and permission of department.

Supports students completing a minor in teaching English as a second language. This course advances students' understanding of the field of Second Language Acquisition (SLA) and its connection with English language learning in the classroom context. Assessment, curriculum, and standards in relation to teaching English as a second language are examined carefully and critically. A wide range of cultural, linguistic, psychological, and social processes that are at the basis of language learning and acquisition, and current research findings are highlighted. Requires reading, interactive participation in class, as well as planning and preparation for engagement in classroom environments, instruction in classroom environments, and formative and summative reflection on academic and clinical assignments. Twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Michigan Academic Standards, WIDA Standards, and the Michigan Core Teaching Practices. *Staff*

## EDUC 319: Health and Wellness in the Elementary Classroom

(1/2 Unit)
Introduces elementary education students to a holistic approach for promoting healthy and active lifestyles for their students. Prospective teachers become familiar with designing and integrating movement, health and physical education content in K-8 classrooms. Includes a required field placement in a K-8 public school or other educational setting. *Shanton.*

## EDUC 322: Teaching of Instrumental Music in the Schools

(1 Unit)
Offered in alternate years. Same as MUS 322. *Staff.*

## EDUC 325: Teaching of Music in the Elementary School

(1 Unit)
Offered in alternate years. Same as MUS 325. *Staff.*

## EDUC 328: Teaching of Choral Music in the Secondary School

(1 Unit)
Same as MUS 328. *Staff.*

## EDUC 338: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Humanities

(1/2 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in English and world languages (French, German and Spanish) in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke, Shanton.*

## EDUC 339: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Humanities

(1 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in English and world languages (French, German and Spanish) in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke, Shanton.*

## EDUC 345: Methods of Teaching of Modern Languages

(1 Unit)
Same as MLAC 345. *Guenin-Lelle.*

## EDUC 348: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Social Sciences

(1/2 Unit)
Prerequisites: Education 202, 203 and permission of department.
Supports secondary education students with majors/minors in history, political science, and psychology in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke.*

## EDUC 349: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Social Sciences

(1 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in history, political science, and psychology in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Henke.*

## EDUC 354: Mathematics Pedagogy in Elementary Schools: Context, Motivation and Engagement

(1 Unit)
Prerequisites: EDUC 195 , EDUC 196 and permission of department.
Examines relevant research base and theory on early mathematics learning, assessments and pedagogical approaches. Looks at culturally responsive pedagogy with children from a variety of cultural, economic, ethno-linguistic and racial backgrounds. Emphasizes mathematics-specific teaching in terms of the high-leverage knowledge, practices, and strategies needed to address all of the constructs of mathematics developing in an integrated manner and in the service of meaningful learning and success. Requires planning and preparation, engagement in classroom environments, instruction in classroom environments, and formative and summative reflection. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers of Lower Elementary (PK-3) Education, Early Childhood Quality Standards, and the Michigan Core Teaching Practices. *Staff*

## EDUC 355: Mathematics Pedagogy in Elementary Schools: Context, Motivation and Engagement

(1 Unit)
Prerequisites: EDUC 195 , EDUC 196 and Permission of the Education Department.
Examines relevant research base and theory on early mathematics learning, assessments and pedagogical approaches. Looks at culturally responsive pedagogy with children from a variety of cultural, economic, ethno-linguistic and racial backgrounds. Emphasizes mathematics-specific teaching in terms of high-leverage knowledge, practices, and strategies needed to address all of the constructs of mathematics developing in an integrated manner and in the service of meaningful learning and success. Requires planning and preparation, engagement in classroom environments, instruction in classroom environments, and formative and summative reflection. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the

Standards for Preparation of Teachers PK-3 and 3-6, Early childhood Quality Standards, ad the Michigan Core Teaching Practices. *Staff*

## EDUC 358: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Sciences

(1/2 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in biology, chemistry, geological sciences, physics, and mathematics in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Staff.*

## EDUC 359: Teaching for Understanding in a Diverse World: Inquiry and Reflection in the Pedagogy of the Sciences

(1 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Supports secondary education students with majors/minors in biology, chemistry, geological sciences, physics, and mathematics in developing subject-specific pedagogical content knowledge through the exploration of professional and theoretical literature, projects, and teaching experiences. Inquiry-oriented and field-based. *Staff.*

## EDUC 363: Supplemental Preparation for Teaching Grades 3-4

.25 unit
Prerequisites: EDUC 195, 196 and permission of department.
This course supports prospective teachers to extend their certification to include grades 3-6. Students will further develop communication, analytical skills, creativity, and in-depth exploration of teaching and learning in 37. 5 hours of clinical experiences across grades 3-4 in elementary schools. *Staff*

## EDUC 364: Supplemental Preparation for Teaching Grades 5-6

.25 unit
Prerequisites: EDUC 195, 196 and permission of department.
This course supports prospective teachers to extend their certification to include grades 3-6. Students will further develop communication, analytical skills, creativity, and in-depth exploration of teaching and learning in 37. 5 hours of clinical experiences across grades 5-6 in elementary schools. *Staff*

## EDUC 370: Literacy Essentials for Elementary Curriculum Design and Assessment

(.5 Unit)
Prerequisites: EDUC 195 , EDUC 196 and permission of the Education Department.
Examines relevant research base and theory on early literacy acquisition and learning processes, assessments, and pedagogical approaches. Looks at culturally responsive pedagogy with children from a variety of cultural, economic, ethno-linguistic and racial backgrounds. Emphasizes the motivations, knowledge, practices, and strategies involved in teaching and learning. Requires planning and preparation, engagement in classroom environments, instruction in classroom environments, and formative and summative reflection. Ten hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers of Lower Elementary (PK-#) Education, Early Childhood Quality Standards, and the Michigan Core Teaching Practices. This course is required for all K-12 French, German, and Spanish majors. *Staff*

## EDUC 371: Literacy Essentials for Elementary Curriculum Design and Assessment

(1 Unit)
Prerequisites: EDUC 195 , EDUC 196 and permission of department.
Examines relevant research base and theory on early literacy acquisition and learning processes, assessments, and pedagogical approaches. Looks at culturally responsive pedagogy with children from a variety of cultural, economic, ethno-linguistic and racial backgrounds. Emphasizes the motivations, knowledge, practices, and strategies involved in teaching and learning. Requires planning and preparation, engagement in classroom environments, instruction in classroom environments, and formative and summative reflection. Twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for Preparation of Teachers of Lower Elementary (PK-3) Education, Early Childhood Quality Standards, and the Michigan Core Teaching Practices. This course is required for all K-12 French, German and Spanish majors. *Shanton.*

## EDUC 373: Literacy Pedagogy in Secondary Schools

(1 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Examines literacy pedagogy in the secondary content areas. Field experiences in public school classrooms provide opportunities to observe learners and to practice the skills, methods, and strategies for teaching content literacy. Should be taken the semester prior to student teaching. *Henke, Staff.*

## EDUC 374: Teaching Advanced Concepts in Biology

(1/4 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Extends elementary education students' knowledge of biology-related scientific phenomena. Students design instructional experiences to teach concepts to K-8 audiences, culminating in final project which includes a digital portfolio and public performance. *Staff.*

## EDUC 375: Teaching Advanced Concepts in Chemistry

(1/4 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Extends elementary education students' knowledge of chemistry-related scientific phenomena. Students design instructional experiences to teach concepts to K-8 audiences, culminating in final project which includes a digital portfolio and public performance. *Staff.*

## EDUC 376: Teaching Advanced Concepts in Geology

(1/4 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Extends elementary education students' knowledge of geology-related scientific phenomena. Students design instructional experiences to teach concepts to K-8 audiences, culminating in final project which includes a digital portfolio and public performance. *Staff.*

## EDUC 377: Teaching Advanced Concepts in Physics

(1/4 Unit)
Prerequisites: EDUC 202, EDUC 203 and permission of department.
Extends elementary education students' knowledge of physics-related scientific phenomena. Students design

instructional experiences to teach concepts to K-8 audiences, culminating in final project which includes a digital portfolio and public performance. *Staff.*

## EDUC 382: International Education Practicum

(1/2 Unit)
Prerequisites: Acceptance to Fritz Shurmur Center for Teacher Development; application and approval of instructor. Students travel and study abroad, teach a lesson, and conduct an individual inquiry project in an education setting. Using comparative education and cultural studies frameworks, students gain new insights about education abroad and in the United States. This course is designed to enhance awareness of diversity, globalization, and cross-cultural competencies. Students are required to meet regularly with instructor before and after the practicum experience. Includes a course fee. *Henke, Shanton.*

## EDUC 387: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## EDUC 388: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## EDUC 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## EDUC 396: Boundary Crossings in Elementary Schools

(1 Unit)
Prerequisites: EDUC 202, EDUC 203.
Focuses on learning about and working in the Albion Public Schools with children/youth from different backgrounds. Combines curriculum and classroom management theory and practice, and emphasizes exploring and developing integrative and creative teaching skills before doing the student teaching semester. Note: This Maymester course/experience begins during the spring semester and extends for three and one-half weeks after the spring semester for all junior elementary teacher education students. *Shanton, Staff.*

## EDUC 397: Boundary Crossings in Secondary Schools

(1 Unit)
Prerequisites: EDUC 202, EDUC 203.
Focuses on learning about and working in the Albion Pubic Schools with youth from different backgrounds. Combines curriculum and classroom management theory and practice, and emphasizes exploring and developing integrative and creative teaching skills before doing the student teaching semester. Note: This Maymester course/experience begins during the spring semester and extends for three and one-half weeks after the spring semester for all junior secondary teacher education students. *Henke.*

## EDUC 398: Shurmur Mentorship-Practicum

(1/2 Unit)
Prerequisites: EDUC 202, EDUC 203, junior standing with a minimum 2.7 cumulative GPA and permission of the Education Department.
Develops a deeper awareness of the complexities in education and policy issues. Pairs students with mentors who work with education policy issues. Includes interpretation and evaluation of current educational policy issues faced by administrators and legislators who work on behalf of children and youth. Offered on a credit/no credit basis. This course is optional, not a requirement for certification. *Staff.*

## EDUC 411: Directed Study

(1/2 Unit)
*Staff.*

## EDUC 412: Directed Study

(1 Unit)
*Staff.*

## EDUC 421: Student Teaching, Grades PK-3 and/or 3-6

(3 Units)
Prerequisites: All elementary education concentration courses need to be completed. Advising and permission from department.
Internship is completed in relevant subject areas at grades PK-3 and/or 3-6, under the supervision of a recommended and tenured teacher. Clinical experiences begin the first day of the semester, and ends on the penultimate week of classes. Support for and engagement in a student teaching internship are integral to the course. On-site guidance and supervision by a clinical experience supervisor occurs a minimum of five times across the semester.Instructor of record for the student teaching seminar also provides regular support for student teachers enrolled in the internship. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee (but can be reimbursed by the Shurmur Center). Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. Offered on a credit/no credit basis. Offered on a credit/no credit basis. *Staff.*

## EDUC 422: Student Teaching, Grades 6 through 12 (6-12)

(3 Units)
Prerequisites: All secondary education concentration courses need to be completed. Advising and permission from department.
Internship is completed in relevant subject areas at grades 6-12, under the supervision of a recommended and tenured teacher. Clinical experiences begin the first day of the semester, and ends on the penultimate week of classes. Support for and engagement in a student teaching internship are integral to the course. On-site guidance and supervision by a clinical experience supervisor occurs a minimum of five times across the semester.Instructor of record for the student teaching seminar also provides regular support for student teachers enrolled in the internship. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee (but can be reimbursed by the Shurmur Center). Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. Offered on a credit/no credit basis. Offered on a credit/no credit basis. *Staff.*

## EDUC 423: Student Teaching, Kindergarten through Grade 12 (K-12)

(3 Units)
Prerequisites: All K-12 education concentration courses need to be completed. Advising and permission from department.
Internship is completed in multiple grade levels (e.g., 6-8 & 9-12; K-5 & 9-12), under the supervision of a recommended and tenured teacher. Clinical experiences begin the first day of the semester, and ends on the penultimate week of classes. Support for and engagement in a student teaching internship are integral to the course. On-site guidance and supervision by a clinical experience supervisor occurs a minimum of five times across the semester. Instructor of record for the student teaching seminar provides regular support for student teachers enrolled in the internship. Students are required to access the Internet Criminal History Access Tool (ICHAT) through the Michigan State Police website and submit the report to the Education Department. Students are responsible for the $10 ICHAT fee (but can be reimbursed by the Shurmur Center). Students must also complete an Albion College criminal history check form and a Family Educational Rights and Privacy Act (FERPA) consent to release form. Offered on a credit/no credit basis. Offered on a credit/no credit basis. *Staff.*

### EDUC 431: Seminar: Elementary Student Teaching

(1 Unit)
Prerequisite: Permission of department.
A capstone course reflecting on practice in the classroom. Focuses on professional development, portfolio design, technology integration and classroom management. Taken concurrently during student teaching semester. *Shanton.*

### EDUC 432: Seminar: Secondary Student Teaching

(1 Unit)
Prerequisite: Permission of department.
A capstone course reflecting on practice in the classroom. Focuses on professional development, portfolio design, technology integration and classroom management. Taken concurrently during student teaching semester. *Henke.*

## English: Literature

### ENGL 122: Black Environmentalism

1 unit
An interdisciplinary exploration of past and present relationships between Black folks and the land, with a particular interest in 1) the way communities of color carry an unjust weight of environmental degradation in the U.S. and 2) how institutional racism, white privilege, and economic class have shaped the environmental movement in the U.S. *Christensen*

### ENGL 123: Family Matters

1 unit
An introduction to literary study focusing on representations of family in literature. Genres and forms include poems, short stories, novels, and plays. *Miller*

### ENGL 124: Myth and Legend

1 unit
A survey of ancient myths and legends from a variety of traditions. Discussion topics include creation myths, the development of narrative, the nature of the divine, the cultural contexts of ancient literature, the role of "the classics" in constructions of a western European "tradition." *MacInnes*

## ENGL 125: Writing Through the Pain

1 unit
This class addresses the question of literature's relevance and the practice of reading critically, purposefully, and pleasurably. It explores how literature people deal with shit -- that is, with the waste human bodies produce (and become), the turmoil they experience in their hearts and minds, and the many ways they bump up against the brokenness of the world. *Roberts*

## ENGL 128: Fight the Man!

1 unit
This course considers the pleasures and potencies of novels, poems, and essays that fight systems of oppression and unjust institutions through the power of the imagination and the written word. *Christensen*

## ENGL 129: Secrets and Lies

1 unit
An introduction to literary study focusing on secrets, lies, and other literary manipulations. Topics include mystery, deception, misinformation, and the ability of literary form to withhold as well as reveal truths. Genres and forms range from short poems to novels and plays. *Miller*

## ENGL 130: Reading Dangerously

1 unit
What does it mean to "read dangerously"? How is this different from reading for an assignment or reading for entertainment? Is it about reading "dangerous books" or is it about something else? And why do it at all? These are some of the questions we'll consider as we explore various texts that help us consider the importance of literature in our lives and societies. *L. Brown*

## ENGL 153: Us vs. Them

1 unit
Explores representations of identity, discrimination, and resistance through select science fiction and fantasy works by Octavia Butler, Yoon Ha Lee, and others. *MacInnes*

## ENGL 155: Antiracism & Young People's Lit

1 unit
This class will explore the complicated place of racism and antiracism in literature written for young people. Students will read picture books, chapter books, and YA books in order to examine the ways that kids' books reinforce and, as important, disrupt racist ideas. *Roberts*

## ENGL 157: Animals & Animality

1 unit
Explores the representation of non-human animals in literature, from animal fables to modern animal stories. Topics include the nature of the human and negative animality as a tool for legitimizing violence not only against non-human animals but also against other humans. *MacInnes*

## ENGL 158: Dystopian Narratives

1 unit
Just as utopia is an imagined ideal society typically characterized by peace, safety, harmony, and satisfaction, dystopia is its opposite--a society rife with injustice, disarray, struggle, and collapse. Because dystopian texts reflect the values, desires, and fears of the time and place in which they're written, this course will explore several such narratives, considering how they both respond to and actively shape our social, political, and environmental perspectives and behavior. Text vary by semester, but regularly featured authors include Margaret Atwood and Octavia Butler. *L. Brown*

## ENGL 159: Redneck Environmentalism

1 unit
An environmental literature and writing course that values and explores land-based traditions--such as hunting, fishing, and farming--while interrogating the ways those very traditions might teach us to ignore or deny how inequalities of race, class, and gender undermine the health and beauty of our environment. *Christensen*

## ENGL 222: Shakespeare

1 unit
Prerequisistes: One of the following: Completion with a 2.0 or better of THEA 209, THEA 280, or one course numbered ENGL 120 to ENGL 189; or junior standing.
Examines the language and performance in Shakespeare's plays and poetry with particular attention to the representation of gender. Same as THEA 222. *MacInnes*

## ENGL 224: Victorian Ghosts

1 unit
Prerequisite: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
An exploration of elegies and ghost stories grounded in the historical contexts of 19th-century Britain. Topics include the rise of modern funerary culture; religion and spiritualism; scientific approaches to the afterlife; and the development of psychology and evolutionary theory. Texts will include poems, short stories, and novels. *Miller*

## ENGL 225: Monsters Within: Violence in Medieval and Renaissance Literature

1 unit
Prerequisites: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
A study of the pervasive issue of violence in early literature, including the way that literature both encodes and challenges the structural violence of race, class, gender. Texts range from warrior epics of the migration era to the tragedies of Shakespeare. *MacInnes*

## ENGL 230: Defining the Human

(1 Unit)
Prerequisite: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
A survey of representative works of English literature from the seventeenth to the late nineteenth century. Authors typically include Dryden, Swift, Montagu, Pope, Johnson, Blake, Wordsworth, Coleridge, Austen, Tennyson, Hopkins, and Wilde. *Miller*.

## ENGL 233: Writing Women in America

1 unit
Prerequisite: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
This class will explore what women wrote and how they were written in the eighteenth and nineteenth centuries in America. It will examine how male and female writers constructed gender in their respective texts, by turns reinforcing and disrupting the gendered expectations of early America. Topics will include the role of emotion and reason, the intersections of race and gender, and economic and political work of the imagination. *Roberts*

## ENGL 251: Contemporary Literature

(1 Unit)
Prerequisite: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
A study of British and American writers whose major work has been done since 1945. *Staff*

## ENGL 253: British Literature, 900-1660

(1 Unit)
A survey of representative works of English literature from *Beowulf* to Paradise Lost. Authors typically include Chaucer, Spenser, Shakespeare, Sidney, Donne, Wroth, Philips, and Milton. *MacInnes, Staff.*

## ENGL 254: Latinx Literature

1 unit
Prerequisites: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189; or sophomore standing; or permission of instructor.
A survey of contemporary poetry, short stories, and novels (written in English) by Chicanx, Cuban American, Dominican American, and Puerto Rican authors. Discussion topics include the construction of the "Latinx" identity and questions of immigration, the homeland, gender, and class, as well as the role of language and storytelling within acculturation. *Mesa*

## ENGL 258: LGBTQ+ Literature

1 unit
Prerequisite: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
Examines LGBTQ literature written in Great Britain and America from the Renaissance to the present, including works by such writers as Shakespeare, Whitman, A. Lowell, Woolf, Forster, Baldwin, Obejas, Lorde, Becker, Winterson, and Cunningham. Considers such questions as: What makes a text 'gay'? To what extent does the cultural oppression of LGBTQ lives shape the literary texts they produce? To what extent do these works affect literary genres, form a literary tradition, and influence existing traditions? *Staff.*

## ENGL 259: Native American Literature

1 unit
Prerequisites: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
An exploration of 20th & 21st century Native American literature. We will consider myth and folklore, as well as poetry, novels, memoir, short stories, essays, comics, and film as we investigate the role and features of language and storytelling across different indigenous oral and print traditions. Discussion topics include the ongoing negotiations of

identity in language ("Indian"; "indigenous"; "Native American"), citizenship and tribal autonomy, acculturation, and gender, as well as religious and spiritual beliefs. *L. Brown*

## ENGL 262: Divided Nations

1 unit
Prerequisites: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
An exploration of the ways that various writers have engaged with issues of national division, destruction, or discord. We'll read contemporary literature across a range of national contexts to examine how issues identify, citizenship, social justice, and human rights unfold across various stages of national creation, internal conflict, or dissolution. *L. Brown*

## ENGL 263: Orcs, Elves, & the Environment

1 unit
Prerequisites: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
An extended exploration of J.R.R. Tolkien's, The Lord of the Rings, focused on its literary and imaginative value and its relevance to current issues of environmentalism, sustainability, and ecological literacy. *Christensen*

## ENGL 272: Wild Things: Wilderness Lit

1 unit
Prerequisites: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
An exploration of literary representations of wildness and wilderness--as ideas and geographical realities. We'll reflect on what we value in the natural world and why, and we'll investigate how the fictional and nonfictional stories we tell ourselves about wildness and wilderness shape our decisions regarding which aspects of our environment we find worthy of protection. *Christensen*

## ENGL 278: Terrorists and Treehuggers

1 unit
Prerequisite: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
An interdisciplinary study of the past, present, and future of environmental radicalism. Typical authors include Rachel Carson, Edward Abbey, Paul Watson, and Wangari Maathai. *Christensen*

## ENGL 321P: Redeeming Eve: Renaissance Women's Writing

1 unit
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.
An introduction to Renaissance women's studies and to literature written by English women in the early modern period (1500-1700). The readings combine literature and non-fiction of the period with modern critical works on women in the Renaissance. Examines the ways in which authorship was defined in the period and the ways such definitions either excluded or restricted female authors. Particular attention is given to larger issues of Renaissance studies such as the status and role of women, the gendering of subjectivity, and the relationship between gender and sexuality. *MacInnes*

## ENGL 327: The 20th Century in English Literature

1 unit
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.
An examination of ideas surrounding nation, national literature, citizen and political standing, family, anti-colonialism, and post-colonialism. Although some important non-literary documents are considered, the selected texts are principally literary and include works by such writers as Joseph Conrad, James Joyce, Chinua Achebe, Virginia Woolf, Zadie Smith, Pat Barker, Anita Desai, and Michael Ondaatje. *Staff*

## ENGL 329: Modern Poetry

1 unit
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.
A study of the major modern poets: Eliot, Yeats, Frost, Stevens, and others. *Staff.*

## ENGL 335: Contemporary U.S. Literature

1 unit
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.
An exploration of U.S. literature across the past fifty years, this course will examine work by established and emerging authors to consider how various texts have shaped and responded to ongoing contestations over issues such as race, gender, sexuality, class, and citizenship in contemporary society. This includes debates regarding notions of "America" and "American-ness" as well as thinking about the U.S. and its literature in an increasingly post-modern, multicultural, global context. Texts will be drawn from a range of authors and a variety of genres. *L. Brown*

## ENGL 343: Emerson, Thoreau, Du Bois

1 unit
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.
An Extended exploration of three key works of American Literature--Ralph Waldo Emerson's, Essays, Henry David Thoreau's, Walden, and W.E.B. Du Bois', The Souls of Black Folk -- guided by one primary question: What do these authors and their work have to tell us about how we should live our lives today in the midst of so much racial inequality and environmental crisis? *Christensen*

## ENGL 344P: Whitman and Dickinson in Context

1 unit
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.
An examination of two of the most important and decidedly different poets ever to have lived and written in the United States. Considers Whitman and Dickinson in relation to one another and within a number of contexts that shaped the composition and reception of their work—nineteenth-century poetry and poetics, the American Civil War, the expanding and evolving print culture, and the early and late twentieth-century conceptions of nineteenth-century American poetry. *Roberts*

## ENGL 352P: Toni Morrison

1 unit
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL

220 to ENGL 289; or pemission of instructor.
A close study of Toni Morrison's work across genres, including her fiction, speeches and essays, literary criticism, children's books (co-authored with her son), and glimpses of her work as an editor. Major attention is given to issues of race, gender, class, community, and nation; other topics include the history of critical response to Morrison's fiction and the variety of theoretical approaches to reading and interpreting her work. Students will engage with published scholarship on Morrison's work to produce an original literary analysis of a chosen text or theme in Morrison's oeuvre. *L Brown*

## ENGL 358: Literature of the Great Lakes

(1 Unit)
Prerequisites: Sophomore standing or higher or permission of instructor.
A bioregional exploration of representative poems, novels, and essays written by Great Lakes authors. Typical authors include Richard Powers, Bonnie Jo Campbell, Lorine Niedecker, James Wright, Joseph Boyden, and Holling Clancy Holling. *Christensen.*

## ENGL 360: The Problem of Race in American Literature

(1 Unit)
Prerequisite: Sophomore standing or higher or permission of instructor.
An examination of a number of continuing problems expressed in American poetry, fiction, drama, and essays by white and black writers from the nineteenth to the twenty-first centuries. Writers include Larsen, Baldwin, Ellison, Beatty, Senna, O'Connor, and McCullers. *Lockyer.*

## ENGL 362P: Love In The 19th Century

1 unit
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.
Love is many things--it is an idea, a feeling, an action, a religious imperative, and a political and literary tool. This class uses love to examine the various ways that American writers both challenge and reinforce racial and gender hierarchies. Texts will include novels and poetry by white and BIPOC authors who wrote in (or in a few cases wrote about) nineteenth-century America. *Roberts*

## ENGL 364: Literature of the American Civil War

1 unit
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.
An examination of the literature of the American Civil War, broadly conceived. Texts include fiction and poetry, political documents and slave narratives. Discussions address the relationship between history and literature, print culture, and the human experience of war, among other things. *Roberts*

## ENGL 367: The American Novel

1 unit
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.
An examination of the novel as both a traditional and experimental genre in American letters. Texts include Herman Melville's *Moby Dick* and William Faulkner's *Absalom, Absalom!* and between five and seven additional novels selected to provide students with varied opportunities to do advanced work in American literary studies. *Staff*

## ENGL 368: Literature of the Grate Lakes

1 unit
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.
An investigation of Great Lakes writers from a bioregional perspective focusing on how geographical terrain, animal and plant communities, and human consciousness play powerful roles in shaping the literature of a specific place. *Christensen*

## ENGL 370P: Pre-Modern Ecologies

1 unit
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.
Examines the role that non-human animals, plants, and the environment play in the poetry and drama of pre-modern writers. Attention is given to the ways in which attitudes toward nature and definitions of humans are implicated in continuing environmental problems such as deforestation, urbanization, precarity, climate change, and extinction. *MacInnes*

## ENGL 373: Victorian Sexualities

1 unit
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.
An exploration of how Victorians wrote and thought about sexuality and gender. Authors typically include Tennyson, Rossetti, Carroll, Collins, Stevenson, Wilde, and Gissing. Discussions address such topics as Victorian marriage, "fallen women," imperial desire, sexual violence, and homosexuality. *Miller*

## ENGL 375: Shakespeare I

(1 Unit)
Prerequisite: Sophomore standing or higher or permission of instructor.
A study of Shakespeare's plays before 1600, including at least two tragedies, five comedies, and four history plays. The plays are examined individually as particular theatrical events in their own context and in subsequent ages, and conditions of production in Shakespeare's theater are considered. Major attention is given to the representation of gender in the plays, and other topics include the history of critical response, the variety of theoretical approaches currently available, and the many political and social agendas which the plays may have been made to serve. *MacInnes.*

## ENGL 375P: Literary Detectives

1 unit
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or permission of instructor.
A study of detective fiction focusing on its origins in nineteenth-century Britain. Investigates the historical contexts that shaped the development of the genre, including the rise of criminology and anthropology, scientific debates about nationality and race, British imperialism, and the occult. Texts range from 19th century works (including Sherlock Holmes stories) to 21st century detective novels. *Miller*

## ENGL 382: British Fiction after 1850

1 unit
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.
A study of the British novel from the time of Dickens to the present. *Staff*

### ENGL 383: (Un)Settling Homeland

1 unit
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.
A consideration of the relationship between domestic practices and national projects (such as colonialism and imperialism) in literature. WE will draw on feminist and postcolonial theory to examine novels and short stories by a diverse range of writers and study how gender, racial, ethnic, and national identities inform the histories and/of nation represented (and negotiated) in fiction. *L. Brown*

### ENGL 384: Idea of Nature, Nature of Ideas

(1 Unit)
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.
An interdisciplinary exploration of the relationship between the imagination and the natural world in the works of key American writers. Draws on the creative and critical tools of multiple disciplines—including literary studies, creative writing, and natural history. Typical authors include H.D. Thoreau, Annie Dillard, James Galvin, Bernd Heinrich, and Mary Oliver. *Christensen.*

### ENGL 385: Literary Theory

1 unit
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.
A study of key theoretical concepts (like "intention" and "discourse") and theoretical orientations (for example, new criticism, deconstruction, feminist criticism, and the new historicism). Assignments range from applying a theoretical approach to developing a response to a theoretical question. *Staff*

## English: Special Studies

### ENGL 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### ENGL 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### ENGL 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ENGL 287: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ENGL 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ENGL 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ENGL 387: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ENGL 388: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ENGL 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ENGL 391: Internship

(1/2 Unit)
Opportunities in journalism, editing, publishing, and other fields. Offered on a credit/no credit basis. *Staff.*

## ENGL 392: Internship

(1 Unit)
Opportunities in journalism, editing, publishing, and other fields. Offered on a credit/no credit basis. *Staff.*

## ENGL 394: Internship

(2 Units)
Opportunities in journalism, editing, publishing, and other fields. Offered on a credit/no credit basis. *Staff.*

## ENGL 401: Seminar

(1/2 Unit)
Prerequisite: Sophomore standing or higher or permission of instructor.

Advanced study of selected writers, and/or literary genres. Examples of recent seminars include Three Irish Poets, Fiction of Cormack McCarthy, and The American Renaissance. *Staff.*

### ENGL 402: Seminar

(1 Unit)
Prerequisite: Sophomore standing or higher or permission of instructor.
Advanced study of selected writers, and/or literary genres. Examples of recent seminars include Three Irish Poets, Fiction of Cormack McCarthy, and The American Renaissance. *Staff.*

### ENGL 411: Directed Study

(1/2 Unit)
Prerequisites: Junior or senior standing and permission of instructor.
(Permission of department required to be counted toward the major.) Usually taken in preparation for the honors thesis. *Staff.*

### ENGL 412: Directed Study

(1 Unit)
Prerequisites: Junior or senior standing and permission of instructor.
(Permission of department required to be counted toward the major.) Usually taken in preparation for the honors thesis. *Staff.*

## English: Writing and Language

### ENGL 100W: Writing Essentials

1 unit
An introduction to the basics of college writing, with special attention to word and sentence fundamentals. Emphasizes generating ideas for writing, imagining words that match ideas, and learning/practicing writing (and revising) grammatically and structurally sound papers, in a variety of styles and genres. Must be taken for a numerical grade. (Not counted toward the major.) *L. Brown, Christensen, Roberts.*

### ENGL 101W: College Writing

1 unit
An introduction to the idea and practice of college writing. Emphasizes writing as process, with close attention to generation of ideas, clarity of expression at the sentence level, organization and logic of argumentation, conventions of academic discourse, and strategies for revision. *Staff*

### ENGL 102W: Honors College Writing

(1 Unit)
An honors level version of ENGL 101 for students with superior writing skills. Admission by placement only. (Not counted toward the major.) *Staff.*

### ENGL 104W: Pleiad Practicum I

.25 unit
Experience in journalism production with the Pleiad, Albion College's award-winning, student-run campus news source. May include reporting, writing, editing, photography, videography, podcasting, marketing, and/or graphic design. Regular weekly meeting attendance required. All enrolled students must apply for and be accepted to a paid or volunteer position on the Pleiad staff. Offered on a credit/no credit basis in the Fall and Spring semesters under the close supervision of the Pleiad's student leadership and faculty adviser. *Quesenberry*

## ENGL 203W: Advanced Writing: College and Beyond

1 unit
Sophomore standing or above and one of the following: completion of ENGL 101W or 102W with a grade of 2.0 or better, recommendation of student's instructor in ENGL 100W, placement during Orientation or advanced placement in English.
Advanced study of and practice in writing beyond the 101-level, with emphasis on writing for specific audiences, techniques of argumentation, stylistic choices available to writers, and increased sophistication in thought and expression. Required of students obtaining elementary teacher certification. *Christensen, MacInnes*

## ENGL 204W: Pleiad Practicum II

.50 unit
Prerequisites: ENGL 104W or instructor permission
Experience in journalism production with the Pleiad, Albion College's award-winning, student-run campus news source. May include reporting, writing, editing, photography, videography, podcasting, marketing, and/or graphic design. In addition to regular weekly meeting attendance, students will complete biweekly Pleiad assignments and work closely with the faculty adviser on journalism skills and goal-setting. All enrolled students must apply for and be accepted to a paid or volunteer position on the Pleiad staff equivalent to at least a 4-hour weekly commitment. May be repeated for credit up to a maximum of 2 units toward major or minor. *Quesenberry*

## ENGL 207W: Multimedia Journalism

1 unit
Prerequisite: Completion of ENGL 101 or ENGL 101H with a grade of 2.0 or better, recommendation of student's instructor in ENGL 100, advanced placement in English or permission of instructor.
An introduction to reporting, writing, filming, and editing for print and online media, including discussion of media law and ethics, AP style, and magazine writing. Preparation for internships. Prerequisite for all advanced journalism courses. *Quesenberry*

## ENGL 208W: Professional Writing

1 unit
Prerequisite: Sophomore standing or above and one of the following: completion of ENGL 101 or ENGL 101H with a grade of 2.0 or better, recommendation of student's instructor in ENGL 100, placement during SOAR or advanced placement in English.
An introduction to the practice of workplace and technical writing, including design and visual argument. Emphasizes the analysis of a variety of professional rhetorical situations and the production of appropriate texts in response. *Staff*

## ENGL 213W: Writing In Place

1 unit
Prerequisite: ENGL 101W or permission of instructor.
An experiential study of environmental writing, with a focus on place, nature, and the relationship between humans and

their environments. Students write in a variety of genres and modes, including exposition and creative non-fiction. *Christensen*

## ENGL 215W: Introductory Creative Writing

1 unit
Prerequisite: Completion of ENGL 101W or ENGL 102W with a grade of 2.0 or better, recommendation of student's instructor in ENGL 100W , advanced placement in English or permission of instructor.
A study in the craft of both poetry and fiction, including imagery, lyricism, character development, form, plot, and style. Students write and revise their own poems and short stories. Reading in and discussion of contemporary literature as well as critiques of fellow writers' work. *Brown, Mesa.*

## ENGL 218W: Introduction to Writing Creative Nonfiction

1 unit
Prerequisite: Completion of ENGL 101W or ENGL 102W with a grade of 2.0 or better, recommendation of student's instructor in ENGL 100W , advanced placement in English or permission of instructor.
A study of creative nonfiction in its various forms. Discussion of the ways in which writing creative nonfiction (memoirs, personal essays, etc.) differs from journalistic writing and the ways in which it employs lyrical and fiction-writing techniques. Students will write and revise their own creative nonfiction (minimum 30 pages). Requires written critiques of fellow writers' work and extensive reading in and writing about contemporary creative nonfiction. *D. Brown, Mesa*

## ENGL 219W: Screenwriting Fundamentals

1 unit
Prerequisite: Completion of ENGL 101W or ENGL 102W with a grade of 2.0 or better, recommendation of student's instructor in ENGL 100W , advanced placement in English or permission of instructor.
An intensive study of feature-film screenplay format and structure, including a workshop of student step outlines, treatments, and screenplays. In the first part of the semester, students are assigned exercises addressing specific screenwriting issues, including character, setting, dialogue, and subtext, and read and analyze already-produced screenplays. In the second part, students write and revise a short (minimum 30-minute) script. *D. Brown*

## ENGL 255: African American Literature

1 unit
Prerequisite: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
A survey of African-American literature from the eighteenth century until the present day. Authors typically include Phyllis Wheatley, Frederick Douglass, James Weldon Johnson, Langston Hughes, Nella Larsen, James Baldwin, and Toni Morrison. *Roberts*

## ENGL 260: Immigration in Literature

1 unit
Prerequisite: Completion with a 2.0 or better of one unit numbered ENGL 120 to ENGL 189, or permission of instructor.
The representation of immigration and immigrant life in North America, especially in texts written by people who are themselves immigrants or the children of immigrants. Topics considered include working class experience, the psychic upheaval caused by drastic relocation, the special tensions that arise between children and parents as life is made in a

new world, and the formation of ethnic/racial identity through contact with those already resident in North America. *Staff*

## ENGL 303W: English Language

1 unit
Prerequisite: Junior or senior standing or permission of instructor.
History, structure and usage of the oral and written English language. Required of students obtaining elementary teacher certification. *Staff*

## ENGL 304W: Pleiad Practicum III

1 unit
Prerequisites: Credit in two semesters of ENGL 104; completion of ENGL 204 or ENGL 207 with a 2.0 or better; or instructor permission.
Experience in journalism production with the Pleiad, Albion College's award-winning, student-run campus news source. May include reporting, writing, editing, photography, videography, podcasting, marketing, and/or graphic design. In addition to regular weekly meeting attendance, students will complete weekly Pleiad assignments and work closely with the faculty adviser on journalism skills, leadership skills, goalsetting, and reflection. All enrolled students must apply for and be accepted to a paid or volunteer position on the Pleiad staff equivalent to at least an 8-hour weekly commitment. May be repeated for credit up to a maximum of 2 units toward major or minor. *Quesenberry*

## ENGL 306W: Science, Technical, and Medical Writing

1 unit
Prerequisites: Sophomore standing or above and one of the following: completion of ENGL 101W , fulfillment of the Writing Proficiency Requirement, or the permission of the instructor.
A study of writing in science, technology, and medical fields, with a focus on technical writing genres that may include academic research, journalism, data visualization, instructions, presentations, and/or grant writing. Students compose and revise documents relating to their own fields and interests, while examining how culture, ethics, inclusion, and accessibility factors influence technical writing. *Quesenberry*

## ENGL 307W: Advanced Multimedia Journalism

1 unit
Prerequisite: ENGL 207W  or permission of instructor.
An advanced media workshop with assignments including investigative reporting, specialized coverage, long-form articles, multimedia packages, and short video documentaries. *Quesenberry*

## ENGL 309W: Writing for the Non-Profit Secotr

1 unit
Prerequisites: Sophomore standing or above and one of the following: completion of ENGL 101W , fulfillment of the Writing Proficiency Requirement, or the permission of the instructor.
Advanced study of professional writing in the context of non-profit organizations. Emphasizes writing that is particularly relevant to non-profit work, which may include grants, donor relations, public relations, presentations, and reports. *Quesenberry*

## ENGL 310W: Advanced Editing

1 unit
Prerequisite: At least one of the following: ENGL 203W , ENGL 207W , ENGL 208W , or permission of instructor.
An advanced workshop for editing professional and journalistic documents with discussion of standardized American-English grammar, revision for clarity and conciseness, legal and ethical compliance, and use of formal style guides. *Quesenberry*

## ENGL 316W: Intermediate Poetry Workshop

1 unit
Prerequisite:ENGL 215W or permission of instructor.
A workshop for continued study and practice in writing poetry. Students examine form in free verse and traditional verse (the lyric, blank verse, sonnets, etc.); write new poems, including a series of formal exercises; and extensively revise their own poetry. Students also write critiques of fellow writers' work and read contemporary poetry. *Mesa*

## ENGL 318W: Intermediate Fiction Workshop

1 unit
Prerequisite: ENGL 215W or permission of instructor.
A workshop for continued study and practice in writing fiction, with special emphasis on narrative design. In addition to producing 50 new pages of fiction, students substantially revise their work, and write and revise several short-short stories. This course also requires written critiques of fellow writers' work and extensive reading in and writing about contemporary fiction. *D. Brown*

## ENGL 324P: The Age of Elizabeth

1 unit
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.
An exploration of Elizabethan literature in its literary and cultural context. Examines the ways in which writers deployed poetry, prose, and drama in the service of political ambition, literary aspiration, and religious sentiment, as well as erotic desire. The broad goal is to use these literary expressions to discuss the ways that subjectivity in the Renaissance rested uneasily on distinctions between self-assertion and narcissism, soul and body, health and disease. Particular attention is given to ways in which poetic expression contributes to the gendering of subjectivity. *MacInnes*

## ENGL 326: The British Romantics

1 unit
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.
Studies in the Romantic Period (from 1789 to roughly 1830) in Britain. Involves considerable study of the works of the major six poets of the period (Blake, Wordsworth, Coleridge, Byron, Shelley, and Keats) as well as many other writers increasingly gaining scholarly attention (including Mary Wollstonecraft, Dorothy Wordsworth, Thomas de Quincey, Mary Shelley, John Clare, and Felicia Hemans). Examines the Romantic questioning of traditional notions about God, sex, the imagination, the family, the rights of women and of the working classes, the natural world, science, slavery, and aesthetics. *Miller.*

## ENGL 380P: The Novel and the New

1 unit
Prerequisites: Completion with a 2.0 or better of at least three units in English, including one unit numbered ENGL 220 to ENGL 289; or pemission of instructor.

Traces the development of the novel in England from the beginnings in the late seventeenth century up through the Romantic period. Considers the novel's origins in genres like travel narratives, spiritual autobiography, romance tales, criminal biographies, and personal letters. Also considers the effect of historical and cultural factors like criminal law, the slave trade, gender roles, the rise of capitalism, and the literary marketplace on the novel. Authors read include Behn, Defoe, Richardson, Fielding, Sterne, Radcliffe, Austen, and Bronte. *Miller*

### ENGL 416W: Advanced Poetry Workshop

1 unit
Prerequisite: ENGL 316W.
A workshop for advanced poets. Writers further develop their own style and interests, workshop poems, produce a poetry sequence, and complete a polished portfolio. Discussion includes fellow writers' poems, current trends in poetry, and a more nuanced conversation of poetic forms and devices. Poems will be submitted for publication. *Mesa*

### ENGL 418W: Advanced Fiction Workshop

1 unit
Prerequisite: ENGL 318W or permission of instructor.
A workshop for advanced fiction writers. Students write one long short story (minimum 30 pages) in addition to meeting individual goals set in consultation with the instructor, for a total of at least 60 pages over the course of the semester. In addition, students extensively revise their work, read several short-story collections and/or novels, and familiarize themselves with literary journals. This course may also require written critiques of fellow writers' work and presentations of published stories. *D. Brown*

## Environmental Studies: Sustainability and the Environment

### ENVN 101: Fundamentals of Environmental Studies

(1 Unit)
A theoretical and practical introduction to the interdisciplinary field of environmental studies. Cultivates both a broad understanding of ecological principles and the creative capacity to imagine and enact individual and social change that takes those principles into account. *Christiansen, White.*

### ENVN 102: Introduction to the Environment

(1 Unit)
Explores the interconnected web of earth's natural systems including the atmosphere, biological communities, oceans and continents, as well as humankind's interactions with and dependence on them. Major topics include global climate and problems of global warming and desertification; resources and problems of world hunger and population growth; and pollution and problems of ecosystem destruction. *Staff.*

### ENVN 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### ENVN 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ENVN 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ENVN 201: Ecology and Environmental Field Trip

(1/2 Unit)
Prerequisites: Membership in the Center for Sustainability of the Environment and permission of the instructor. Demonstrates, in seminars and a one-two week field trip to a selected region of the United States, how ecosystems have been shaped by the interplay of biological, geological and human history and are thus both adapted to, and susceptible to changes in, modern landscape, climate and human practices. Examines environmental issues of both local and national significance related to these ecosystems. *Staff.*

## ENVN 206: Sustainable Living Seminar

(1/2 Unit)
Residents of the College's E-house and other students explore, through practice, the relationship between their daily actions and the earth's ecosystems. Several models of sustainability are discussed, and students are asked to articulate the view they believe appropriate for their own lives. Students cooperatively develop a significant improvement in the house or its grounds and monitor the environmental footprint of their actions. Note that residence in the E-House is not available in 2015-16. *Staff.*

## ENVN 220: Economics, Politics, and Environmental Policy

(1 Unit)
Examines decisions affecting environmental quality made by government, businesses and individuals; economic analysis relevant to such decisions; the policy-making process; and dispute resolution techniques that may be useful in conflicts over environmental issues. Focuses on current national and local environmental policies, with comparisons to practices in other countries. *Saltzman.*

## ENVN 287: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ENVN 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ENVN 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ENVN 387: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### ENVN 388: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### ENVN 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### ENVN 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

### ENVN 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

### ENVN 401: Seminar

(1/2 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
*Staff.*

### ENVN 402: Seminar

(1 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
*Staff.*

### ENVN 411: Directed Study

(1/2 Unit)
*Staff.*

### ENVN 412: Directed Study

(1 Unit)
*Staff.*

## Ethnic Studies

### ETHN 103: Introduction to Ethnic Studies

(1 Unit)
An introduction to the comparative study of ethnicity, as well as the history and culture of particular ethnic groups in

America. Issues--ethnic identity, ethnocentrism, discrimination, assimilation and multiculturalism--are analyzed from a variety of disciplines in the humanities, social sciences and the arts. Serves as the introductory course for the ethnic studies concentration. *Staff.*

## ETHN 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ETHN 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ETHN 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ETHN 250: Education and Diversity

(1 Unit)
This course introduces prospective educators to the ways in which social inequality affects schooling and schooling affects social inequality. This course is NOT a celebration of difference. Rather, this course is designed to allow students to examine how socially constructed categories (e.g., social class, race, gender, sexual orientation, disability, religion, etc.) are used to privilege some individuals and groups and marginalize others. The course focuses mostly on one social institution, urban public schools in the United States; however, we will examine how the other social institutions influence opportunities for success and failure in schools. *Quinney*

## ETHN 260: Caribbean Identity and Migration

(1 Unit)
Examines the cultural richness and diversity of the Caribbean diaspora with an emphasis on the Spanish-speaking islands, including Cuba, Dominican Republic and Puerto Rico, drawing on music, literature, film and history. Considers how this population continues to influence growth and change in American society by looking at issues of identity, migration patterns, and broader economic, cultural and social conditions. *Staff.*

## ETHN 270: Hip Hop and Social Change

(1 Unit)
Investigates the social, cultural and political dynamics of the hip hop generation. Uses hip hop to frame the analysis of U.S. and urban "social problems" since the late 1960s. Introduces the sociohistorical and sociopolitical roots and development of hip hop, its impact on popular and youth culture, and its significance for understanding American society. Addresses major topics surrounding hip hop including race and ethnicity, gender and sexuality, social class, segregation/mass incarceration, politics, and education. Examines scholarly and popular texts, film, hip hop music, and original student work to gain a comprehensive understanding of these issues. *Quinney.*

## ETHN 280: Children of Immigrants

(1 Unit)
Prerequisite: SOC 101 or ETHN 103 or ANTH 105 or permission of instructor.
A study of theoretical arguments in the current literature on immigrant adaptation and assimilation, public fears of multiculturalism and an examination of empirical research into how social class, race/ethnicity and gender shape outcomes for 1½ and 2nd generation immigrants. Examines in depth the renegotiation of identity and the process of incorporation for immigrant families in the U.S. *Verduzco-Baker*.

## ETHN 287: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ETHN 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ETHN 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ETHN 300: Social Movements

(1 Unit)
This course will review and discuss the theory and research on social movements, with an empirical emphasis on American movements such as the Civil Rights Movement, Women's Movement, and numerous "issue" movements such as peace, environment, neighborhood, sexuality, etc. We will give attention to international movements to develop an understanding of movements in different countries with a focus on structures and cultures. We will talk explicitly about the differences between movements enduring social cleavages such as race, class, gender, and sexuality. This class generally operates from the intellectual standpoint of the activist who is concerned about an issue and wants to do something about it. *Quinney*.

## ETHN 370: Theories and Methods in Ethnic Studies

(1 Unit)
Prerequisite: ETHN 103 or permission of instructor.
Designed as a capstone course to integrate students' Internship and course work experiences and deepen their analytical understanding of issues related to race/ethnicity. Examines the development of ethnic and race relations, ethnic and race discrimination, and American identity using different multicultural theoretical perspectives. Includes field work and/or other research on a topic related to race/ethnicity. *Staff.*

## ETHN 387: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## ETHN 388: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### ETHN 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### ETHN 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

### ETHN 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

### ETHN 401: Seminar

(1/2 Unit)
*Staff.*

### ETHN 402: Seminar

(1 Unit)
*Staff.*

### ETHN 411: Directed Study

(1/2 Unit)
Prerequisite: Permission of department chair.
*Staff.*

### ETHN 412: Directed Study

(1 Unit)
Prerequisite: Permission of department chair.
*Staff.*

## French

### FREN 101: Elementary French

(1 Unit)
Introduces the French language and the francophone cultures through the study of basic grammatical concepts and vocabulary. Develops the four skills—listening, speaking, reading and writing—necessary for effective interpersonal, interpretive and presentational communication. Conducted in French. Tutorials with teaching assistants are integrated into the course. French 101 is recommended for students with two years or less of high school French. *Staff.*

## FREN 102: Elementary French, continued

(1 Unit)
Proficiency Expected level of proficiency: FREN 101.
Continuation of FREN 101. Expands vocabulary, grammar and cultural knowledge to enable a more informed interpretation and production of spoken and written communication in French. Conducted in French. Tutorials with teaching assistants integrated into the course. *Staff.*

## FREN 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## FREN 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## FREN 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## FREN 201: Environment in the French-Speaking World: changing theme

(1 Unit)
Proficiency Expected level of proficiency; FREN 101 or above or appropriate score on departmental placement test. Exploring current environmental themes important in the French-speaking world in the French language 9listening, speaking, reading and writing). Themes change each semester. *Guenin-Lelle, Yewah.*

## FREN 202: Gender in the French-Speaking World: changing theme

(1 Unit)
Proficiency Expected level of proficiency: FREN 101 or above or appropriate score on departmental placement test. Exploring current themes of gender and sexuality important in the French-speaking world in the French language (listening, speaking, reading and writing). Themes change each semester. *Guenin-Lelle, Yewah.*

## FREN 203: Ethnicities in the French-Speaking World: changing theme

(1 Unit)
Proficiency Prerequisite: Expected level of proficiency: FREN 101 or above or appropriate score on departmental placement test.

Exploring current ethnic studies themes important in the French-speaking world in the French language (listening, speaking, reading and writing). Themes change each semester. *Guenin-Lelle, Yewah*

## FREN 204: Globalism in the French-Speaking World: changing theme

(1 Unit)
Proficiency Prerequisites: Expected level of proficiency: FREN 101 or above or appropriate score on departmental

placement test.
Exploring current transnational or global themes important in the French-speaking world in the French language (listening, speaking, reading and writing). Themes change each semester. *Guenin-Lelle, Yewah*

## FREN 205: History and Culture in the French-Speaking World: changing themes

(1 Unit)
Proficiency Prerequisites: Expected level of proficiency: FREN 101 or above or appropriate score on departmental placement test.
Exploring current historical or cultural themes important in the French-speaking world in the French language (listening, speaking, reading and writing). Themes change each semester. *Guenin-Lelle, Yewah*

## FREN 287: Selected Topics

(1/4 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## FREN 288: Selected Topics

(1/2 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## FREN 289: Selected Topics

(1 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## FREN 301: Advanced Oral and Written Expression I

(1 Unit)
Proficiency Expected level of proficiency: FREN 202, equivalent or appropriate score on departmental placement test.
Development of communication skills in French relative to grammar, syntax, appropriate registers, necessary vocabulary, non-verbal communication and culturally specific idiomatic usage. Also includes the processes of conversation development, thesis formation and strategies for argumentation within French cultural norms, as well as key contemporary issues of importance in the French-speaking world. Conducted in French. *Guenin-Lelle, Yewah.*

## FREN 302: Advanced Oral and Written Expression II

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent.
Development of communication skills in French relative to grammar, syntax, appropriate registers, necessary vocabulary, non-verbal cues and culturally-specific idiomatic usage, as well as skills in French/English and English/French translation. Also includes the processes of conversation development, thesis formation and strategies for argumentation operating within French cultural norms, especially relating to professional life and the workplace. Conducted in French. *Guenin-Lelle, Yewah.*

## FREN 303: French for the Professions

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent.
Offers insights on the French and other French-speaking countries' work environment and the specialized knowledge necessary to communicate effectively in specific professions. Conducted in French. *Guenin-Lelle, Yewah.*

## FREN 314: Multicultural France: Current Issues and Historical Perspectives

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent or permission of instructor.
Explores French society as a dynamic multicultural construct—France's changing place in the world, the changing role of women in French society and changing demographics, especially North African immigrants to France—through reading recent novels or short stories representing these issues. Studies the historical dimensions of the social phenomena and the historical reasons for the current situation. Conducted in French. *Guenin-Lelle, Yewah.*

## FREN 315: Writing/Filming France Inside Out

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent.
Applies various theories—narratology, explication de texte, and theories of adaptation—to critically inquire into the construction of literary texts and their filmic representations. Stresses oral and written communication in French. Conducted in French. *Guenin-Lelle, Yewah.*

## FREN 320: French Women Writers and Feminist Criticism

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent.
Analysis of works by French women writers from the Middle Ages to the present, as well as works of feminist critical theory. Conducted in French. Offered every three years. *Guenin-Lelle.*

## FREN 330: French Louisiana: The Cajun and Creole Experiences

(1 Unit)
Proficiency Expected level of proficiency: FREN 301 or equivalent.
A study of French Louisiana in both Acadiana and New Orleans, through literature, music, history and other avenues. *Guenin-Lelle.*

## FREN 351: French Society from Marie de France to Louis XIV

(1 Unit)
Proficiency Expected level of proficiency: FREN 303, FREN 314 or FREN 315.
Incorporates literature, art, history and l'histoire des idées, or changing epistemologies, during the French ancien régime (the Middle Ages, the Renaissance, the baroque and classical periods of the seventeenth century and the beginning of the Enlightenment in the early eighteenth century). Examines central issues such as the place of "the Divine" and humankind in the universe, the role of classical antiquity relative to traditions, identity and power, the role of women in society and the role of education as a vehicle for change. Conducted in French. *Guenin-Lelle, Yewah.*

## FREN 353: Francophone Africa

(1 Unit)
Proficiency Expected level of proficiency: FREN 303, FREN 314 or FREN 315.
A study of texts and contexts of francophone (Central and West) African societies through in-depth analyses of history,

politics, music, art, film and literature, and especially, how those elements have shaped the people's contemporary world view. Conducted in French. *Yewah.*

## FREN 354: The French Caribbean: Les Antilles créoles

(1 Unit)
Proficiency Expected level of proficiency: FREN 303, FREN 314 or FREN 315.
Surveys post-colonialism, la créolisation, le métissage and changing identities. Topics include history and geography of these islands, situating them as part of the New World as well as having enduring cultural, linguistic and political bonds with France; Aimé Césaire and his essentialist quest for identity via Africa and the past; la créolisation, as first proposed by Glissant; and contemporary social issues, represented in literature, art and cinema. Conducted in French. *Guenin-Lelle, Yewah.*

## FREN 355: Quebec: A World Apart

(1 Unit)
Proficiency Expected level of proficiency: FREN 303, FREN 314 or FREN 315.
Examines socioeconomic, political, cultural, literary and artistic forces as well as relevant historical situations that have shaped this French-speaking "island" in anglophone North America. Conducted in French. *Guenin-Lelle, Yewah.*

## FREN 387: Selected Topics

(1/4 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## FREN 388: Selected Topics

(1/2 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## FREN 389: Selected Topics

(1 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## FREN 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

## FREN 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

## FREN 398: Practicum

(1/2 Unit)
Prerequisite: Permission of instructor.
Experience in teaching French in the classroom or with individual students under the supervision of an instructor. Offered on a credit/no credit basis. *Staff.*

### FREN 400: Senior Seminar

(1/4 Unit)
Prerequisite: Declared French major or minor.
Students will reflect on lessons learned in the French program, identify competencies they have developed in French and in other areas of study, understand the importance of these competencies in today's world, and leave Albion more confident in their preparedness to enter the next stage of their professional development. *Guenin-Lelle, Yewah.*

### FREN 401: Seminar

(1/2 Unit)
Prerequisite: Permission of instructor.
Special topics in languages, literature or civilization for advanced students. Conducted in French. *Staff.*

### FREN 402: Seminar

(1 Unit)
Prerequisite: Permission of instructor.
Special topics in languages, literature or civilization for advanced students. Conducted in French. *Staff.*

### FREN 411: Directed Study

(1/2 Unit)
*Staff.*

### FREN 412: Directed Study

(1 Unit)
*Staff.*

## Geology

### GEOL 101: Introductory Geology

(1 Unit)
A survey course designed for liberal arts students covering many aspects of physical geology, the study of active earth processes. Labs illustrate lecture materials and the techniques used by geologists. One field trip. Complements the material covered in GEOL 103; either course can serve as an introductory course in geology. *Staff.*

### GEOL 103: Introduction to Earth History

(1 Unit)
A survey course designed for liberal arts students and covering many aspects of historical geology, the study of evolving environments and life forms on earth. Labs utilize fossils, rock samples, maps and field trips to illustrate

techniques used by historical geologists. Complements the material covered in GEOL 101; either course can serve as an introductory course in geology. *Staff.*

## GEOL 104: Earth Resources and the Environment

(1 Unit)
Without earth resources, civilization would not exist. Gold, diamonds, water, oil, building materials—all of our material resources ultimately are derived from the earth. This course examines the origin and geologic occurrence of these materials and the environmental implications of their utilization. No laboratory. *Staff.*

## GEOL 106: Natural Disasters

(1 Unit)
A review of the natural disasters that affect humans and the environment. Emphasizes the causes and prediction of natural hazards, assessment of hazard vulnerability, and disaster mitigation and recovery through case studies of historical and recent natural disasters. Topics include earthquakes, volcanoes, landslides, extreme weather, climate change and floods. No laboratory. *Staff.*

## GEOL 111: Geography and Geographic Information Systems

(1 Unit)
An introduction to the elementary principles, techniques and utility of geographic information systems (GIS) toward the study of world geography, as well as related concepts and techniques involved in creating and using digital maps. Shows how maps (particularly computer-generated maps) can help in displaying and analyzing geographic and other spatial data, and the use of these analyses in modeling cultural and natural systems. Some prior computer experience is helpful, but is not required. Lecture and laboratory. *McRivette.*

## GEOL 115: Oceans, Atmosphere and Climate

(1 Unit)
Describes the world's oceans and atmosphere and considers how they interact with one another, and with humans. Topics include the geological evolution of the ocean basins, ocean-atmosphere circulation patterns, ocean currents, climate and weather patterns, storms and weather fronts, paleo-oceanography and the history of climate, and the chemical composition of the oceans. Emphasizes the role of the oceans in mediating global climate, global change, global dispersal of pollution and other environmental concerns. No laboratory. Offered in alternate years. *T. Lincoln, Wilch.*

## GEOL 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## GEOL 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## GEOL 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## GEOL 201: Structural Geology

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
Study of stress-strain relationships and behavior of materials, with particular reference to recognition and interpretation of rock structures. Laboratory work includes methods of solving structural problems and the use of geologic maps and cross-sections to interpret sequences of events in complex structural regions. Offered in alternate years. *B. Lincoln.*

## GEOL 203: Mineralogy

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
Crystallography, crystal chemistry, optical and physical properties, and the occurrence of rock-forming minerals, with particular emphasis on the silicate minerals. Laboratory emphasizes hand-specimen and optical identification of minerals using petrologic microscopes. Offered in alternate years. *Menold.*

## GEOL 204: Introductory Petrology

(1 Unit)
Prerequisite: GEOL 203.
Hand-specimen and microscopic identification of minerals and rocks. Recognition and classification of all varieties of igneous, metamorphic and sedimentary rocks, with emphasis on rock-forming processes. Laboratory emphasizes hand-specimen and optical identification of rocks using petrologic microscopes. Offered in alternate years. *Menold.*

## GEOL 205: Sedimentation and Stratigraphy

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
An examination of the processes and principles that control the accumulation and lithification of sediments, based on examples of recent environments and ancient rock sections in many parts of the world. Laboratory emphasizes map-reading skills and methods for studying recent and ancient sediments and rocks. Offered in alternate years. *Bartels.*

## GEOL 208: Geomorphology

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
Geologic processes operating at the earth's surface and the landforms they produce. Includes the study of soil formation, river processes, glaciers, wave action, wind, groundwater and their related landforms. Field trips. Laboratory includes analysis of aerial photographs, topographic maps and experiments with flume and wave tank. Offered in alternate years. *Wilch.*

## GEOL 209: Chronostratigraphy and Invertebrate Paleontology

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103, or BIOL 195.
This course surveys the long history of life, as recorded by the fossil record. A comprehensive examination of invertebrate fossils throughout geologic time emphasizes study of fossils and their identification, biology, evolutionary history, and use in geology. One field trip. Laboratory emphasizes invertebrate fossil identification, functional

morphology, preservation, and geochronologic utility. Offered in alternate years. Laboratory emphasizes fossil identification, morphology, and functional morphology, and geochronologic exercises using fossils and other geologic data. Offered in alternate years. *Marshall.*

## GEOL 210: Regional Field Geology

(1/2 Unit)
Prerequisite: GEOL 101 or GEOL 103, and a major or minor in the department, or permission of instructor.
An in-depth investigation of selected geologic provinces consisting of a seminar course and an 8-14 day field trip. The field trip itself typically begins in early May following commencement. *Staff.*

## GEOL 211: Remote Sensing and Geographic Information Systems

(1 Unit)
Prerequisite: GEOL 111 recommended.
An introduction to the elementary principles, techniques and utility of remotely sensed imagery and image interpretation, especially when used in conjunction with Geographic Information Systems (GIS). Shows how digital maps created from, or utilizing, digital imagery from airplanes, space shuttles and satellites can help in displaying and analyzing spatial data, modeling processes and making decisions. Laboratory emphasizes the use of remote sensing and GIS in a variety of environmental applications. Lecture and laboratory. Offered in alternate years. *McRivette.*

## GEOL 212: Volcanology

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103, or permission of instructor.
Study of volcanic processes, eruptive products and their mechanism of formation, monitoring of active volcanoes, volcanic hazards, and the environmental impact of volcanism. Focuses on historical and modern case studies. Lecture and laboratory. Offered in alternate years. *Wilch.*

## GEOL 287: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## GEOL 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses.
*Staff.*

## GEOL 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## GEOL 302: Ground Water

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
A description of the hydrologic cycle with emphasis on quantifying water budgets and water flow in the shallow earth.

Field techniques include stream gauging and well installation, surveying and slug testing. Analytical and numerical models are used to interpret pump test data and to understand water flow to pumping wells and the dispersal and remediation of contamination. Offered in alternate years. *Staff*

## GEOL 306: Glaciers and Climate Change

(1 Unit)
Prerequisite: GEOL 101 or GEOL 103.
Study of the pace, causes, and impacts of climate change in the geologic record and in today's world. Special emphasis on the role of glaciation in climate change and the impact of glaciation and climate change on the Great Lakes area. Lecture and field trip offered in alternate years. Lecture, laboratory and field trips. Offered in alternate years. *Wilch.*

## GEOL 307: Environmental Geochemistry

(1 Unit)
Prerequisite: GEOL 203 or CHEM 121 .
The application of chemical principles to the study of the earth with emphasis on environmental geochemistry. Topics include the distribution of chemical elements within the earth, rock weathering, the chemistry of natural solutions, surface chemistry and the behavior of contaminants in the environment. Laboratories involve both field and laboratory techniques and rely heavily on state-of-the-art instrumentation, including optical emission and x-ray fluorescence spectroscopy and ion chromatography. Offered as needed. *T. Lincoln.*

## GEOL 308: Isotope Geochemistry

(1 unit)
GEOL 101 or GEOL 103
Origin and abundance of elements and their isotopes; distribution and chemistry of elements in Earth and its environment. Theorectical aspects of isotope behavior; stable and radiogenic isotopes. Principles of geochoronolgy. Use of isotopes as tracers iin crust and mantle processes. Stable isotopes as indicators of environment and paleoclimate. *Menold*

## GEOL 309: Vertebrate Paleontology

(1 Unit)
Prerequisite: GEOL 103 or BIOL 195.
The fossil record, evolution, morphology, adaptation and paleobiogeography of fish, amphibians, reptiles, birds and mammals. The interactions of vertebrates with ancient floras, climates and plate configurations will be emphasized. Lecture and laboratory. Offered in alternate years. Same as BIOL 309. *Bartels.*

## GEOL 311: Advanced Geographic Information Systems

(1 Unit)
Prerequisite: GEOL 111 or permission of instructor.
The study of the more advanced capabilities of Geographic Information Systems (GIS). Emphasizes spatial modeling and analysis using GIS software such as ArcView GIS. Topics include map algebra, point pattern analysis, network analysis, grid analysis and 3-D surface analysis. Students learn how to use these and other GIS tools for decision-making, model building and the effective use of maps. Lecture and laboratory. Offered in alternate years. *McRivette.*

## GEOL 314: Field Methods

(1.5 Units)
Prerequisites: GEOL 201, GEOL 204, GEOL 205 (or their equivalents) or permission of instructors.
Summer field camp course focused on geologic mapping in the northern Rocky Mountains. Field work is done in sedimentary, metamorphic and igneous rocks. Offered in summer session, in alternate years. *Staff.*

## GEOL 387: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## GEOL 388: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## GEOL 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## GEOL 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

## GEOL 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

## GEOL 401: Seminar

(1/2 Unit)
Prerequisite: GEOL 101 or permission of instructor.
Critical evaluation of current topics in geology as determined by student and staff interest. Recent topics have been regional geology, engineering geology, paleoecology and volcanology. *Staff.*

## GEOL 402: Seminar

(1 Unit)
Prerequisite: GEOL 101 or permission of instructor.
Critical evaluation of current topics in geology as determined by student and staff interest. Recent topics have been regional geology, engineering geology, paleoecology and volcanology. *Staff.*

## GEOL 411: Directed Study

(1/2 Unit)
*Staff.*

### GEOL 412: Directed Study

(1 Unit)
*Staff.*

## German

### GERM 101: Elementary German

(1 Unit)
Introduction to German language and culture through the contextualized study of grammatical concepts and vocabulary. Study and practice in the four language skills—listening, reading, writing and speaking—necessary for the interpersonal, interpretive and presentational modes of communication. Conducted primarily in German. Tutorials with native speakers are required. Note: Students who have taken more than one year of German in high school must take the placement test before enrolling in this course. *Myers.*

### GERM 102: Elementary German, continued

(1 Unit)
Proficiency Expected level of proficiency: GERM 101 or equivalent.
Continuation of GERM 101. Expansion of vocabulary, work with more complex grammatical structures. Tutorials with native speakers are required. *Myers.*

### GERM 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### GERM 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### GERM 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### GERM 201: Intermediate German

(1 Unit)
Proficiency Expected level of proficiency: GERM 102 or equivalent.
Continuation of the study of German language and culture through the contextualized study of grammatical concepts and vocabulary. Continues the development of the four basic skills necessary for the interpersonal, interpretive and presentational modes of communication. Authentic tapes and texts are the foundation of the teaching materials. Conducted in German. Tutorials with native speakers are required. *Myers.*

### GERM 202: Intermediate German, continued

(1 Unit)
Proficiency Expected level of proficiency: GERM 201 or equivalent.
Continuation of GERM 201. Practice with more sophisticated dialogues, reading of unedited short stories, poems and other authentic materials. Conducted in German. Tutorials with native speakers are required. *Myers.*

## GERM 287: Selected Topics

(1/4 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## GERM 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## GERM 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## GERM 301: German Conversation and Composition

(1 Unit)
Proficiency Expected level of proficiency: GERM 202 or equivalent.
Development of speaking, listening and writing skills; selective review of complex grammatical structures. Practice speaking about everyday situations in different ways (e.g., role play, dialogues, skits, oral reports); use of audio tapes. Writing of exercises and compositions with emphasis on correctness of expression, stylistic appropriateness and idiomatic usage. Learning of specialized vocabulary and idioms; writing of different types (e.g., dialogues, letters, journals, essays). *Myers.*

## GERM 302: German Conversation and Composition, continued

(1 Unit)
Proficiency Expected level of proficiency: GERM 301 or equivalent.
Continuation of practice in speaking, listening and writing skills; selective review of complex grammatical structures. Practice speaking about everyday situations in different ways (e.g., role play, dialogues, skits, oral reports); use of audio tapes. Writing of exercises and compositions with emphasis on correctness of expression, stylistic appropriateness and idiomatic usage. Learning of specialized vocabulary and idioms; writing of different types (e.g., dialogues, letters, journals, essays). *Myers.*

## GERM 303: German Language and Culture for the Professions

(1 Unit)
Proficiency Expected level of proficiency: GERM 301 or equivalent, or permission of instructor.
Intended to improve students' communicative skills in German and provide knowledge for the professions. Covers aspects of the German business world such as banking, marketing and organizational structures. Assignments include development of marketing strategies and development of a business plan for a start-up venture. *Myers.*

## GERM 304: Conversation and Composition I

(1 unit)
Prerequisites: GERM 301 or equivalent, or permission of the instructor
This course is intended to help you improve your writing and speaking skills. ALL COMMUNICATION WILL BE CONDUCTED EXCLUSIVELY IN GERMAN. Although this is not specifically a content course we will learn some aspects of the history and culture of German-speaking countries to spur discussions and ideas for writing assignments. In written assignments attention should be given to the quality of the content, extending your vocabulary range, and consistent grammar. For in-class discussions more attention will be given to communicating your intent rather than strict assessment of grammar. In support of these goals we will cover select grammar points presented in context in each chapter. This is an upper division course and it is assumed that you have already acquired a solid foundation in grammar. *Staff*

## GERM 306: German Cultural History: From Germania to Nation State

(1 Unit)
Proficiency Expected level of proficiency: GERM 301 or equivalent, or permission of instructor.
Introduces pivotal moments and figures in German cultural history from the Roman Empire to the creation of the first German nation-state in 1871. Provides a deeper understanding of German-speaking culture and society as well as the constructed nature of all forms of national identity. *Myers.*

## GERM 307: German Cultural History: Empire, Stunde Null, Reunification

(1 Unit)
Proficiency Expected level of proficiency: GERM 301 or equivalent, or permission of instructor.
Explores the radical transformations in German society and culture from the late Wilhelminian era to reunification at the end of the twentieth century through the combination of historical texts, literature, film and "eyewitness" documentation. Situates German cultural history in the larger context of world history. Offered every third year. *Myers.*

## GERM 308: Crime Stories and the Nazi Past

(1 Unit)
Proficiency Expected level of proficiency: GERM 301 or equivalent, or permission of instructor.
Begins with a brief literary exploration of Christian morals and ethics that developed after the Reformation, then turns to the Romantic fascination with good and evil. Explores early twentieth-century examples of pseudo-crime stories to address such questions as why the German crime fiction tradition emerged so late relative to the British, French or American traditions, or why the "hard-boiled school" only began in Germany during the 1980s. Closes with several detective novels that illustrate how Germans after World War II have sought to come to terms with the Nazi past. *Myers.*

## GERM 314: Multiculturalism in Germany (World War II to present)

(1 Unit)
Proficiency Expected level of proficiency: GERM 301 or permission of instructor.
Explores how German society has become multiculturally constructed since World War I—from the Holocaust aftermath to current sociocultural debates about the role and treatment of women of color, the large Turkish immigrant population, and Islam and Islamic nationalism in Germany—through the study of various discourses (fiction, essay, speeches, poetry, film, TV news) representing these issues. Studies how perceptions of ethnic difference have evolved in Germany and have become intertwined with social and political debates of the day. Conducted in German. *Myers.*

## GERM 316: Crisis in Language: A Literary Survey (1890-1945)

(1 Unit)
Proficiency Expected level of proficiency: GERM 301 or GERM 302 or equivalent, or permission of instructor.
Includes a selection of German works from different genres (plays, short fiction, poetry, theoretical texts) and films from the era 1890-1945. Focuses on each work as a cultural representation of the historical context in which it was written or produced, exploring how each was engaged with the social, political and cultural transformations of the era (e.g., social Darwinism, crisis of narration and language, bourgeois morals, the individual and society, the role of the artist, the Third Reich). *Myers.*

## GERM 356: German Film

(1 Unit)
Proficiency Expected level of proficiency: GERM 301 or equivalent, or permission of instructor.
The historical contextualization of German films beginning during the early part of the twentieth century through the post-1989 era. Explores various themes in a specific national setting, while linking to important cultural, political and social issues beyond Germany: (1) the increasing degradation and isolation of the worker in capitalistic society and the breakdown of social class models; (2) emergence of Fascist ideology and the culpability of all Germans for its disaster; (3) the German attempt to come to terms with the past after World War II, but also as Germany sought to reunify after 1989. Through outside readings and in-class discussions considers how all of these films illustrate important German and European, as well as global, social and cultural historical transformations. *Myers.*

## GERM 387: Selected Topics

(1/4 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## GERM 388: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## GERM 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## GERM 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

## GERM 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

## GERM 398: Practicum

(1/2 Unit)
Prerequisite: Permission of instructor.

Experience in language teaching in the classroom or with individual students under the close supervision of a regular instructor. Offered on a credit/no credit basis. *Staff.*

### GERM 401: Seminar

(1/2 Unit)
Prerequisite: Permission of instructor.
Special topics in languages, literature or civilization for advanced students. Conducted in German. *Staff.*

### GERM 402: Seminar

(1 Unit)
Prerequisite: Permission of instructor.
Special topics in languages, literature or civilization for advanced students. *Staff.*

### GERM 411: Directed Study

(1/2 Unit)
Prerequisite: Permission of department chair.
*Staff.*

### GERM 412: Directed Study

(1 Unit)
Prerequisite: Permission of department chair.
*Staff.*

## History: Asian and Latin American History

### HIST 111: East Asia: Cultures and Civilizations

(1 Unit)
A survey of the cultural, political and economic interactions among the societies of East Asia from the sixth century to the present, with an emphasis on the history of China, Japan and Korea. Major themes include the historical construction of "East Asian" regional identity; traditional culture; imperialism and colonialism; nationalist movements; and the debate over "Asian values" and modern economic development. *Ho.*

### HIST 142: Modern Latin America History

(1 Unit)
An introduction to Latin America from independence in the 1820s to the present. Native Americans, slaves and European immigrants struggled with elites to form societies of "order and progress." Films and oral histories show how the world economy affected working men and women and their responses: revolutions, religion, nationalism and popular politics. *Kanter.*

### HIST 262: Visualizing East Asia

(1 Unit)
This course examines how images and image-making processes have profoundly shaped modern East Asian history and

culture. It covers the 18th century to the present, including traditional Chinese paintings and Japanese woodblock prints, 19th and 20th century photographs and films, and popular visual media in contemporary East Asia. Local visual representations from China, Japan, Taiwan, and Korea will be looked at alongside images produced by Western groups. The course places strong emphasis on hands-on creative activities and exploration – drawing from cultural and global history, visual theories, and the history of photography. *Ho.*

## HIST 263: Modern China

(1 Unit)
Analyzes the major events, ideologies and individuals that have shaped Chinese state and society from 1644 to the present. Major themes include Confucianism and traditional culture; foreign imperialism and nationalism; the Maoist years; and political dissent and social change in the 1980s and 1990s. Same as ANTH 263. *Staff.*

## HIST 264: An International History of Modern Japan

(1 Unit)
Same as INTN 264. *Yoshii.*

## HIST 270: Latin American Immigration and the U.S.

(1 Unit)
Why do Latin Americans leave their countries? What are their experiences of entering and living in the U.S.? How has their emigration impacted both their homelands and U.S. society? Emphasis on Mexicans, Cubans, and Puerto Ricans in the twentieth century and the development of new "Latino" identities. *Kanter.*

## HIST 300: Slave Societies of the Americas

(1 Unit)
Prerequisite: enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Comparative study of the development of race-based slavery in Spanish America, Brazil, the Caribbean and the U.S. South. Discusses the Middle Passage, plantation life, slave religion, resistance, emancipation and its aftermath. Invites students to consider the history of ethnic relations within multiracial societies. *Staff*

## HIST 301: Gender in Latin American History

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
how have conquest, race mixture, nation-building, consumer culture, and immigration impacted Latin American women and men? This seminar examines the lives of indigenous peasents, African slaves, Spanish nuns and priests, sorceresses, movie stars, and mothers and fathers throughout the Americas. *Staff*

## HIST 350: World War II in the Pacific

(1 unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
This course explores World War II in East Asia and the Pacific, looking at this devastating global conflict from interconnected Japanese, Chinese, and American perspectives. Military and civilian experiences, racial and gendered views, and the transformative roles of international media and wartime culture will feature prominently. Using diverse

historical sources ranging from private letters to popular movies, we will investigate the causes, developments, and lasting repercussions of 20th century East Asia's most horrific war. Our approaches will be interdisciplinary, drawing from the wartime national histories of China, Japan, the United States, Korea, and Taiwan; global history; military history; and cultural studies. *Ho*

### HIST 371: Latin American-U.S. Relations

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Explores essential elements that have shaped U.S. influence in Latin America from the 1820s to the present day, examining official policy as well as ideology, cultural representations, the media and trade issues. Considers this history from multiple perspectives, looking north and looking south, and how notions of race, religion and gender have played into inter-American relations. Analysis of primary source materials is integral. *Staff*

### HIST 382: STEM in East Asian History

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Explores the broad impacts of science, technology, environment, and medicine across East Asia from premodern periods to the present-day. We will investigate the ways in which the human body, space and place, and material-environmental interactions (ranging from manipulations of waterways to climate change) transformed East Asian and global histories. The course will focus on multidisciplinary, comparative approaches and topics including gendered forms of medicine and technology, regional and transnational environmental issues (natural, man-made, or both), and information flows between Asia and the world. *Ho*.

### HIST 399: Contact and Conquest in the Americas

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
1492 marked the first of many meetings between Europeans and native American peoples. This seminar takes an intensive look at the remarkable encounters that occurred during the first century of European contact. Readings center on primary sources: written and pictorial records from that era that tell of meetings in the Caribbean, Mexico, Brazil, Florida and Canada. These texts require critical reading by class participants. Not offered every year. *Staff*

## History: European History

### HIST 102: Ancient and Medieval Worlds

(1 Unit)
A survey from 3000 B.C.E. to the Renaissance, including Mesopotamian, Greek, Roman, Carolingian and European societies. Religion, politics, war, thought, society and family issues will be discussed. *Staff.*

### HIST 103: Making Europe Modern: 1500 - Present

(1 Unit)
Europe from the Renaissance to the end of the twentieth century. Major topics include: Wars of Religion, French and Industrial Revolutions, and war and peace in the twentieth century. *Brade.*

## HIST 217: Europe's Age of Revolutions: The 19th Century

(1 Unit)
Europe from the French and Industrial Revolutions to the end of the First World War as reflected in history, literature and film. *Brade.*

## HIST 218: Europe's World Wars and Cold Wars: The 20th Century

(1 Unit)
Europe from the end of the First World War to the end of its Cold War partition reflected in history, literature and film. *Brade.*

## HIST 229: Film Images of World War II

(1 Unit)
The history of the Second World War and world films made about the war from the 1930s to the present. (Film fee). Same as PLSC 229. *Cocks, Grossman.*

## HIST 251: Ancient Greece

(1 Unit)
Follows the development of ancient Greek civilization from the middle of the second millennium BCE through the final Roman conquest of Greece in 146 BCE, with special attention to the Archaic, Classical and Hellenistic periods. Surveys political and military history as well as social and cultural history, including such topics as art, architecture, athletics, drama, literature, leisure, philosophy, town-planning, religion, sexuality and work. *Staff.*

## HIST 252: Ancient Rome

(1 Unit)
An examination of ancient Roman history from the legendary foundation of the city in 753 BCE through the Republican Period, the Principate, and the Dominate, to the "fall" of the Western Roman Empire in 476 A.D. Covers the evolution of the Roman constitution and the spread of Roman imperial domination throughout the Mediterranean, as well as important social, cultural, and economic phenomena. *Staff.*

## HIST 290: The Viking World

1 unit
The name of Viking conjures images of barbaric plunderers during a Dark Age, but they, and the world they lived in, were so much more. The Norse people who went raiding also perfected ships that were the first to cross the North Atlantic and traded across the rivers of Russia to the great cities of Constantinople and Baghdad, all while creating a literature of epic myths and family sagas unsurpassed in world history. Learn about these Norse poets and the bright age they lived in, when empires fell and rose, when England and France first became kingdoms, and a diversity of brilliant scholars carried on the legacy of Rome from Irish monasteries to Muslim metropolises. *Riedel*

## HIST 291: The Crusades

(1 Unit)
The Crusades, where Christian Europe invaded the Muslim Middle East, are far more complicated than just a war of religions. Learn how Muslims and Christians both fought and made peace, how Crusading zeal returned to Europe in

brutal religious and political violence, and how the crusades widened Europe's horizons and led to the explorations of Marco Polo and Columbus.  Discover how the Crusades continue to influence our thinking and conflicts today. *Staff*

### HIST 294: The First World War

(1 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
An exploration of the origins, conduct and consequences of the First World War, with special attention to cultural factors as well as political, economic, social and military issues. *Staff.*

### HIST 309: Pax Britannica: The British Empire

(1 Unit)
Prerequisite:  Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
An exploration of the varied, complex and fascinating phenomenon that was the British Empire from its late eighteenth-century crisis, through its unparalleled global predominance in the nineteenth century, to its dissolution/transformation in the middle years of the twentieth century. *Staff.*

### HIST 311: The Holocaust: History and Memory

(1 Unit)
Prerequisite:  Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
This course will study one of the most important events of the twentieth-century: the Holocaust. We will discuss the development of modern antisemitism, the rise of fascism and Hitler, the evolution of Nazi Jewish policy, the mechanics of the Final Solution, the experiences and responses of the victims, and the post-war attempt to deny these unparalleled crimes through traditional judicial procedures. *Brade*

### HIST 313: 1815 Russia 1945

(1 Unit)
Prerequisite:  Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Russia from the end of the Napoleonic Wars to the end of the Second World War: the collapse of the tsarist autocracy, the Bolshevik revolution, and Russia's struggles within itself and against the outside world. *Staff*

### HIST 390: Modern Germany

(1 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
This seminar focuses on the shifting constructions of German national identity in the twentieth century. We will consider World War I, the Weimar and Nazi eras, Cold War divisions, and reunification. Topics include nationhood, ethnicity, war and genocide. *Brade.*

## History: Global

### HIST 112: African History to 1800

1 unit
This course is a survey of the African continent's history from early human evolution to the eve of European colonial conquest in 1800. Course topics include: early state formation, pre-colonial belief systems, Africa's incorporation into the growing world-economy, and the Trans-Atlantic Slave Trade. *Meert*

### HIST 113: African History After 1800

1 unit
This course surveys major events and processes of the African continent since 1800. Themes include European colonization, African responses to colonial rule, African independence movements, and recent challenges and event in African nations (including, but not limited to: economic inequalities, gender norms, violence, environmental sustainability, and youth cultures). *Meert*

### HIST 260: An International History of the Cold War

(1 Unit)
Same as INTN 260. *Yoshii.*

### HIST 310: Power and Culture in the Asia-Pacific Region

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Same as International Studies 300. *Yoshii.*

### HIST 365: Women in the Global South

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
The course examines women and womanhood in a cross-cultural context, paying particular attention to the experiences of women in Africa, Asia, and the Meddle East. Topics addressed include, but are not limited to: gender norms, religion, tradition, polygamy, motherhood, education reproductive health, wifehood, human trafficking, and the caste system. In each case, the emphasis will not be on victimization, but rather, the resilience and adaptability of women as historical actors in their world. *Meert*

### HIST 383: Jerusalem: City of Faiths

1 unit
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
No city in history had meant so much to so many for so long as Jerusalem. This course covers the legendary kings like David and Solomon 3000 years ago, the tumultuous life of Jesus and Jerusalem's second destruction by the Romans, the Crusades between Muslims and Christians, and the contentious modern conflict between Palestinians and Israelis. We will also examine the many meanings that have made Jerusalem an ideal, the city on a hill, Zion, al-Quds, the axis mundi at the center of the world, inspiration to pilgrims, mystics, utopian idealists and brutal conquerors. Students interested in any time or place can find a connection to Jerusalem. *Riedel*

## History: Special Studies

## HIST 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## HIST 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## HIST 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## HIST 287: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. May be taken more than once for credit. *Staff.*

## HIST 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. May be taken more than once for credit. *Staff.*

## HIST 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. May be taken more than once for credit. *Staff.*

## HIST 387: Selected Topics

(1/4 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
An examination of subjects or areas not included in other courses. *Staff.*

## HIST 388: Selected Topics

(1/2 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
An examination of subjects or areas not included in other courses. *Staff.*

## HIST 389: Selected Topics

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at

least sophomore standing.
An examination of subjects or areas not included in other courses. *Staff.*

### HIST 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

### HIST 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

### HIST 401: Seminar

(1/2 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
*Staff.*

### HIST 402: Seminar

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
*Staff.*

### HIST 411: Directed Study

(1/2 Unit)
*Staff.*

### HIST 412: Directed Study

(1 Unit)
*Staff.*

## History: United States History

### HIST 101: American Dreams and Realities

(1 Unit)
One-semester thematic approach to understanding the American experience from its beginning to the present. The course will attempt to aid students in answering such questions as: "What are my values and how are they connected to the historical past?" Witch hunts, the frontier, violence, the city, technology, war (Hiroshima & Vietnam), success, morals, women, immigration, racism, reform and the environment will be among the themes explored in a search towards defining the American character. *Dick.*

### HIST 131: The United States from Colonization to the Civil War

(1 Unit)
Introductory survey of United States history from pre-settlement of Europeans through the fall of Reconstruction. Examines the multicultural origins of the United States; the economic, social and political course to independence; the early national period; the Jacksonian era; and the causes and results of the Civil War. Also focuses on historical methodology. *Sacks.*

## HIST 132: The United States: 1865-Present

(1 Unit)
Introductory survey of American civilization from 1865 to the present, encompassing the ways that Americans have responded to Reconstruction, Indians and the American West, the rise of the city, industrialization, immigration, imperialism, world wars, the atomic bomb, racial turmoil, changing roles of men and women, the rise of the welfare state, and envrionmental controversies, Recommended for pre-law students. *Dick Dick.*

## HIST 237: America in Crisis: Great Depression, World War II and Cold War

(1 Unit)
America from 1929 to 1960: Stock market crash, Great Depression, Dust Bowl, New Deal, FDR and Hitler, "The Good War," Hiroshima and Nagasaki, McCarthyism and the Red Scare, Baby Boom and "We like Ike." Stress on historical controversies, the roles of workers, women and minorities and the significance of the environment. *Dick.*

## HIST 242: African American History from Africa to the Civil War

(1 Unit)
A history of people of African descent in the United States from their African roots through the end of the Civil War. Stress on the development of slavery and racism in the colonial period; the tensions between slavery and freedom; slave culture, family and religion; race relations in the North; and the black experience in the Civil War. Readings will be drawn from slave narratives as well as historical monographs. *Sacks.*

## HIST 243: African American History, 1865 to the Present

(1 Unit)
A history of black people in the United States from the end of the Civil War to the present. Stress on the rise and fall of Reconstruction, Jim Crow, black migration to the cities, the Harlem Renaissance, the civil rights movement and contemporary issues in race relations. *Sacks.*

## HIST 244: The Civil War and Reconstruction

1 Unit
*Sacks*

## HIST 256: Native North America

(1 Unit)
Same as ANTH 256. *Staff.*

## HIST 275: Mexican American History

(1 unit)
Explores the history of Mexican descent people in the U.S. from 1848 to the present. Particular stress on the evolving construction of Mexican American isentities through primary sources and literature. *Staff*

## HIST 298: The 1960s

(1 Unit)
In-depth examination of a tumultuous decade: civil rights and black power, student protest and New Left, counterculture and Woodstock generation, Vietnam and the anti-war movement, the "other America" and the War on Poverty, Silent Spring and Earth Day, liberation movements, JFK, LBJ, Martin Luther King, Malcolm X, Black Panthers, Detroit Riot, Freedom Summer, Jackson State, Kent State, Watergate, FBI, Feminine Mystique, Cesar Chavez, David Brower, and Rachel Carson. *Dick.*

## HIST 333: The Road to Revolution

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
This course is designed to immerse students in the ideas and events that led to the American Revolution and independence from Britain. Through a variety of readings and activities, students will gain a comprehensive understanding of the attitudes, cultures, tensions, and motivations of North America's residents and British imperial officials in this period. After an in-depth investigation of the tensions rising from the end of the French and Indian War (1754-1763) and the emerging desire for separation from England, we will spend a portion of the semester engaged in a simulation game based in New York City. *Sacks.*

## HIST 337: Environmental History

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Focus on the historical roots of contemporary environmental problems. Analysis of both the destructive and the conservation sides of the American experience. Native American perspectives, women and nature, technology, Thoreau, John Muir, energy crisis, ecology as the subversive science, a land ethic, Rachel Carson's Silent Spring, and environmental impacts (DDT, Love Canal, atomic testing, PBB, dioxin, acid rain) are stressed. Concentration on America, but within a global frame of reference. Interdisciplinary emphasis that invites students from a variety of majors, particularly those in the sciences and those treating public policy issues. Special opportunities for those who enjoy the out-of-doors. *Staff*

## HIST 340: History of Women in the U.S., 1877-Present

(1 Unit)
Prerequisite: Previous course work in women's studies or history.
Does some shared history link American Indian girls sent to BIA boarding schools at the turn of the century with the immigrant girls who labored for the Triangle Shirtwaist Factory? How is "women's" history different? What difference does women's history make to U.S. history? This course considers such questions by examining the situations of women in the U.S. from 1877 forward. It introduces students to the theories and methods of women's history that scholars have developed over the last quarter century. Central to this course is the recognition that women's experiences are not simple parallels to men's, and involve differences among women such as those based on sexuality, class, race and regional factors. *Franzen.*

## HIST 347: Race and Sports in America

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
Sport has long occupied a place at the heart of American culture and society. Organized athletics have also served as symbolic sites of protest, power and inclusion for the nation's racial minorities. This course explores the history of American sports as a way to understand the profound impact that the phenomenon of athletic competition has had in the development of American race relations with particular attention paid to the experiences of African American athletes. *Sacks.*

### HIST 372: The Civil War and Reconstruction

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
This course will explore the causes, course, and consequences of the American Civil War, from the 1840s to 1877. The primary goal of the course is to understand the multiple meanings of a transforming event in American history. Those meanings may be defined in many ways: national, sectional, racial, constitutional, individual, social, intellectual, or moral. We will especially examine three broad themes: the crisis of union and disunion in an expanding republic; slavery, race, and emancipation as national problem, personal experience, and social process; and the political and social challenges of Reconstruction. The course attempts to understand the interrelationships between regional, national, and African-American history. *Sacks*

### HIST 381: U.S. Immigration History

(1 Unit)
Prerequisite: Enrollment in 300-level courses requires prior completion of a 100-level history course or above and at least sophomore standing.
The story of uprooted ethnic, religious and racial groups from the first arrival in North America of Europeans through the age of American imperialism in the early twentieth century. The America of asylum and freedom is compared to the traditions of nativism and racism by examining Afro-, Asian-, Euro-, Mexican-, and Native American experiences. *Sacks.*

## Honors Program

### HSP 12xH: Great Issues in Science

(1 Unit)
A seminar for Prentiss M. Brown Honors Program students in which they read and discuss classic and modern works in the history, philosophy, methodology and ethics of science and technology. All seminars fulfill one of the Modes of Inquiry or Category requirements of the College's core curriculum. *Staff.*

### HSP 13xH: Great Issues in Humanities

(1 Unit)
A seminar for Prentiss M. Brown Honors Program students in which they read and discuss classic and modern works in the history, philosophy, methodology and ethics of science and technology. All seminars fulfill one of the Modes of Inquiry or Category requirements of the College's core curriculum. *Staff.*

### HSP 15xH: Great Issues in Social Science

(1 Unit)
A seminar for Prentiss M. Brown Honors Program students in which they read and discuss classic and modern works in the history, philosophy, methodology and ethics of science and technology. All seminars fulfill one of the Modes of Inquiry or Category requirements of the College's core curriculum. *Staff.*

### HSP 17xH: Great Issues in Fine Arts

(1 Unit)
A seminar for Prentiss M. Brown Honors Program students in which they explore, through representative readings, exhibits, concerts, performances and lectures, major issues in the development of the fine arts: the relationship between the artist and society, the evolution of critical theory in the arts and the nature of creativity. Individual courses may focus on the visual arts, music, theatre, film or dance. All seminars fulfill one of the Modes of Inquiry or Category requirements of the College's core curriculum. *Staff.*

### HSP 289H: Selected Topics

(1 Unit)
Prerequisite: Permission of the Prentiss M. Brown Honors Program director.
An examination of a special topic which is not included in the regular curriculum. *Staff.*

### HSP 397H: Thesis Development Colloquy

(1/4 Unit)
A workshop open to Prentiss M. Brown Honors Program juniors and second semester sophomores which guides them through the process of finding and developing a thesis topic and assembling a thesis committee. Students also develop their library research and other thesis-related skills. In the semester they enroll in the colloquy, Honors students may take up to 4 3/4 units without additional tuition charge. Offered on a credit no credit basis. *Staff.*

### HSP 422H: Honors Thesis

(1/2 Unit)-(1 Unit)
Directed independent study leading to the submission of an Honors Thesis. Normally, students begin their thesis research in the second semester of their junior year by enrolling for (1/2 Unit) of Honors Thesis credit with their thesis adviser. This process continues during the students' senior year when they normally take another one to two units of Honors Thesis credit in order to complete their research and write up their results. In the semesters they enroll for Honors Thesis credit, Honors students may take up to five units (where (1/2 Unit) is for thesis credit) without additional tuition charge.

## Human Services

### HUSV 101: Introduction to Human Services

(1 Unit)
Acquaints the beginning student with the human services field, including the philosophy, values, methods and broad scope of the human services, and examines the student's motivation and values in relation to a career in a helping field. An interdisciplinary course designed specifically for the human services concentration. *Keyes, Staff.*

### HUSV 389: Practicum

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

### HUSV 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

### HUSV 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

### HUSV 399: Practicum

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

### HUSV 401: Seminar

(1/2 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
*Staff.*

### HUSV 402: Seminar

(1 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
*Staff.*

### HUSV 411: Directed Study

(1/2 Unit)
*Staff.*

### HUSV 412: Directed Study

(1 Unit)
*Staff.*

## Interdisciplinary

Interdisciplinary courses are offered to bridge the gaps which sometimes exist between differing, but related, academic areas. Each semester a variety of interdisciplinary courses are included in the curriculum. Students in these courses are exposed to a broad range of ideas and concepts which have been integrated to make them intellectually exciting. These courses may be team-taught by two or more faculty members or be problem-oriented courses which, by their nature, do not fit into existing departmental offerings.

### IDY 100: Academic Success

(1 Unit)
Utilizes lecture, discussion, readings and experience-based learning to provide students with an intellectual and practical understanding of psychological theories and concepts related to academic success. Focuses on constructs related to motivation, effort, personal insight, metacognition, self-regulation, the process of change and emotional intelligence. *Staff.*

## IDY 101: Albion College Engagement

(.25 Unit)
Students on Academic Probation Status; those assigned by the Academic Status and Petitions Committee.
Explores the expectations and skills for academic success at the college level through discussion, reading and reflective writing. Students enhance study skills and strategies, time management, note taking, exam preparation and reading critically. Students examine their level of motivation, self-management, self-awareness, and personal responsibility. *Staff*

## IDY 102: Albion College Engagement

(.25 Unit)
Students on Academic Probation Status; those assigned by Academic Status and Petitions Committee.
Explores the expectations and skills for academic success at the college level through discussion, reading and reflective writing. Students enhance study skills and strategies, time management, note taking, exam preparation and reading critically. Students examine their level of motivation, self-management, self-awareness, and personal responsibility. *Staff*

## IDY 103: Albion College Engagement

(.25 Unit)
Students on Academic Probation Status; those assigned by the Academic Status and Petitions Committee.
Explores the expectations and skills for academic success at the college level through discussion, reading and reflective writing. Students enhance study skills and strategies, time management, note taking, exam preparation and reading critically. Students examine their level of motivation, self-management, self-awareness, and personal responsibility. *Staff.*

## IDY 104: Albion College Engagement

(.25 Unit)
Students on Academic Probation Status; those assigned by the Academic Status and Petitions Committee.
Explores the expectations and skills for academic success at the college level through discussion, reading and reflective writing. Students enhance study skills and strategies, time management, note taking, exam preparation and reading critically. Students examine their level of motivation, self-management, self-awareness, and personal responsibility. *Staff*

## IDY 110: Career and Life Planning

(1/4 Unit)
Centers on effective decision-making with direct application to participants' short- and long-range life goals. Emphasizes self-understanding and methods for gathering appropriate external information. Considers the benefits of liberal arts, including critical-thinking, writing and breadth of knowledge. *Kase.*

## IDY 111: Briton Path

(.25 Unit)
Students admitted to the Briton Path program.
Briton Path introduces the college academic experience through both a weekly class and evening Learning Community lab sessions. The culture of college academics: its purposes, methods and organization, is explored. The role of the student in mastering course information and concepts outside the classroom is examined. Effective methods for goal setting, time management, weekly planning, maintaining motivation and developing campus support networks are presented. Practice in applying effective learning strategies begins during class sessions and continues during the evening learning community labs. Evening lab sessions are run by peer academic coaches three evenings a week for two hours. *Staff.*

## IDY 111L: Briton Path Lab

(0 Units)
Students admitted to the Briton Path program.
Laboratory and practical applications for Briton Path course. *Staff.*

## IDY 198: Holocaust Studies

(1/2 Unit)
Prerequsite: None.
Reviews the history of genocide, the history of the Jewish communities in Poland and the history of the Nazi extermination of Jews in Poland during the Second World War. Required for, and restricted to, students selected to participate in the spring Holocaust Studies Service-Learning Project in Poland. Offered in alternate years. *Staff.*

## IDY 262: Arts Integrated Learning

(1 Unit)
Prerequisites: EDUC 195.
Introduces teacher certification candidates to basic elements of arts composition (space, time, energy), performance and artistic analysis as they relate to music, visual art, dance and theatre as well as the work of prominent artists within these disciplines. Creative assignments and lesson plans explored within the course are enacted in diverse learning environments. Culminating projects include the creation and presentation of original works of art, as well as reflection on personal and peer learning. A minimum of twenty hours of clinical experience focuses on development in each of the domains of the Framework for Teaching, the Standards for the Preparation of Teachers PK-12, Early Childhood Quality Standards, and the Michigan Core Teaching Practices. *Staff.*

## TRIO 101: Student Success Strategies

(.25 Unit)
This course is only open to active TRiO Student Support Services participants and promotes academic success, financial knowledge and personal growth through activities, discussion, and reflection. Students will develop a number of academic strategies related to time management, exam preparation, problem-solving, help-seeking, etc. Students will also begin to develop and understanding of how to manage personal finances and money by creating a lifetime account and interacting with the college funded ECMC Learning financial literacy curriculum. *Staff*

## TRIO 201: Student Success Strategies II

(.25 Unit)
This course is only open to active TRiO Student Support Services participants and promotes academic success, financial knowledge and personal growth through activities, discussion, and reflection. Students will build upon their knowledge gained in TRIO 101 by developing and actively engaging with a number of academic strategies related to

time management, exam preparation, Problem-solving, help-seeking, etc. Students will continue to develop an understanding of how to manage personal finances and money by utilizing a lifetime account and interacting with the college funded ECMC Learning financial literacy curriculum. *Staff*

# Interdisciplinary: Health Care Institute

## HCI 100: Introduction to Medicine

(.25 Unit)
An introductory study of Medicine. Explores features of the human body using physiological, neuroscientific, and biochemical approaches in lecture and laboratory settings. Examines ethical dilemmas in the context of medicine. Only open to participants in the Camp Med program. *Staff*

## HCI 101: Exploration of Health Care

(.25 Unit)
Prerequisites: Completion and submission of application materials for the Lisa and James Wilson Institute for Medicine.
Examines myriad healthcare careers and the education, rewards and challenges associated with each one. Emphasizes the team approach to health care, focusing on interactions among individuals with various specializations. *Staff*

## HCI 105: Exploration of Veterinary Medicine

(.25 Unit)
Prerequisites: Completion and submission of application materials for the Lisa and James Wilson Institute for Medicine.
Explores the diverse aspects of Veterinary Medicine in an interactive and hands-on approach. Helps students gain knowledge about the veterinary profession, as well as the skills needed to apply for veterinary school.

## HCI 201: Issues in Health Care

(.25 Unit)
Prerequisites: Membership in the Lisa and James Wilson Institute for Medicine.
Explores a variety of professional and personal issues encountered by people working in the healthcare system. Considers current events and issues related to healthcare. Provides insight into the various professions that make up a collaborative healthcare team. *Staff*

# Interdisciplinary: Paleontology

## PALN 209: Dinosaurs

(1 Unit)
An interdisciplinary examination of the paleontology and biology of dinosaurs and their role in the history of science, popular culture and religion. Lectures, discussions, demonstrations, documentaries and popular films are included. *Bartels.*

# Interdisciplinary: Science

## SCI 205: Women and Ethnic Minorities in Science

(1 Unit)
Prerequisite: One 100-level science course.
An examination of both the history of women and other traditionally excluded persons in science, and the way science has looked at them. The course considers such questions as: Why are there so few members of these groups in science? What contributions have these scientists made? Would science be different if more members of these groups were scientists? *Staff.*

### SCI 285: Integrated Science for Elementary Teachers

(1 Unit)
Prerequisite: MATH 100 or placement evaluation at the MATH 120 level or higher, plus a science course with a laboratory.
An integrated survey of astronomy, biology, chemistry, geology and physics for elementary education students. *Bollman.*

## International Studies

### INTN 130: Introduction to International Studies

(1 Unit)
Introduces concepts of international studies with historical examples. Students are required to observe and analyze developments within a certain region, area, country or organization throughout the semester. *Yoshii.*

### INTN 260: An International History of the Cold War

(1 Unit)
Interprets the Cold War from international perspectives through analyzing the roles of proxy wars in Asia and the anti-colonial movement of the Third World, which defies the conventional analytical framework of the U.S.-Soviet conflicts. Includes study of the official documents of various governments (in English translation) and analyses of the contemporary media coverage and film analysis. Same as History 260. *Yoshii.*

### INTN 262: Pottery and Japanese Traditions

(1 unit)
Explores the aesthetic traditions and history of the Japanese tea culture and pottery-making. Emphasizes the artistic and meditative execution of tea making with wares of art for tea making and tea consumption, in addition to the study of the parcticality of tea as a vehicle for negotiation, deliberation and social interaction in Japan. same as International Studies 262. Same as ART 262 *Chytilo/Yoshii.*

### INTN 264: An International History of Modern Japan

(1 Unit)
Surveys the history of Japan from the seventeenth to the twenty-first century, with special emphasis on how cultural, military, political, and economic interactions with other countries have influenced Japan's national policies and cultural identity over time. Topics range from historical relations with China and Korea, the influence of seventeenth century "Dutch learning," U.S., European, and Russian imperialism in the nineteenth century, Japanese expansion into Asia during the early twentieth century, U.S.-Japan relations during and after World War II, and immigration and population in the twenty-first century. Same as History 264. *Yoshii.*

### INTN 300: Power and Culture in the Asia-Pacific Region

(1 Unit)
Introduces the diversity and development of the Asia-Pacific region that includes countries with traditions of Confucianism, Marxist-Leninist ideology, Western liberalism and Islam. Begins with a historical survey of the political, economic and social development of the region, followed by students' discussions of the prospect of the Asia-Pacific region growing into something similar to the European Community. Special attention is paid to the role of the U.S., an Asia-Pacific country, in this region. *Yoshii.*

### INTN 370: Building on International and Intercultural Experiences

(1 Unit)
Designed for students (including international students at Albion College) who wish to integrate their experiences studying, working or living abroad with a deepened analytical understanding of international and intercultural issues. Students familiarize themselves with the most current scholarship on international studies. Through independent research, they advance their understanding of a particular international issue of their choice and hone their abilities to articulate this issue to an audience. *Yoshii.*

## International Studies: Special Studies

### INTN 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other studies. *Staff.*

### INTN 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other studies. *Staff.*

### INTN 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other studies. *Staff.*

### INTN 287: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. May be taken more than once for credit. *Staff.*

### INTN 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. May be taken more than once for credit. *Staff.*

### INTN 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. May be taken more than once for credit. *Staff.*

### INTN 387: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### INTN 388: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### INTN 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### INTN 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

### INTN 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

### INTN 401: Seminar

(1/2 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
*Staff.*

### INTN 402: Seminar

(1 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
*Staff.*

### INTN 411: Directed Study

(1/2 Unit)
*Staff.*

### INTN 412: Directed Study

(1 Unit)
*Staff.*

## Kinesiology

### KIN 101: Introduction to Kinesiology

(1 Unit)
First-year or sophomore status only, or permission of instructor.
Provides an orientation to various educational pathways, requirements and career opportunities in kinesiology in the areas of teaching, coaching, therapeutic exercise, fitness and health, and sport management professions. An introduction to the interdisciplinary approach to the science and study of human movement. Includes basic concepts of the kinesiology discipline and an overview of the relevance of foundational sub-disciplines. Addresses issues, challenges and current/future trends. Exercise science majors must take this course for a numerical grade. Open to students with first year or sophomore standing only, or permission of the instructor. *Betz, C. Moss.*

## KIN 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## KIN 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## KIN 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## KIN 200: Medical Terminology

(1/2 Unit)
Focuses on the language of medicine—the prefixes, suffixes, word roots and their combining forms—by review of each system of the body. Emphasizes word construction, spelling, usage, comprehension and pronunciation. Introduces students to anatomy and physiology, pathology, diagnostic/surgical procedures, pharmacology and medical abbreviations. *Betz, C. Moss.*

## KIN 201: Foundations of Healthful Living

(1 Unit)
An in-depth presentation of crucial health issues emphasizing the need and effect of exercise and physical activity on the body. Included are units on the cardiovascular system, the muscular system, nutrition, diet, weight control, drugs, fitness and physical profiles, plus individualized exercise and activity programs. Lecture and laboratory. *Staff.*

## KIN 203: First Aid

(1/2 Unit)
Basic and advanced course work and skills in the following areas: CPR, first aid, automated external defibrillator, emergency and non-emergency management of injuries and illnesses and professional rescuer skills. American Red Cross certificates may be earned in each area. Required for the students enrolled in the teacher education program, health minor and athletic training major. *Staff.*

## KIN 205: Water Safety Instructor

(1/2 Unit)
Prerequisite: Current Red Cross Emergency Water Safety Skills and Swimmer Skills.
Designed for students who seek professional insights into teaching and administering aquatic programs, and community swimming programs. The American Red Cross water safety instructor's certificate may be earned. Offered in alternate years. *Staff.*

## KIN 206: Care and Prevention of Athletic Injuries

(1 Unit)
This course will provide a broad overview of athletic injuries and illnesses, preventative measures, and basic means of treatment for these injuries. The role of various allied health professions that come in contact with athletic injuries will be discussed. The topics covered will include epidemiology, athletic injuries/illnesses, injury prevention variables, and healthcare ethics. Basic prevention, evaluation, and care techniques of the most common injuries seen in the athletics setting will be discussed. Hands on skills learned in lab setting will include splinting, taping, and application of elastic wraps. *Staff.*

## KIN 210: Nutrition

(1 unit)
This course will provide students with the foundation for an understanding of the basics of nutrition. The focus will be on the application of nutritional principles to a daily dietary practice and how food choices can enhance health and reduce the risk of chronic diseases. *Cousins, Yocum, Betz, Staff*

## KIN 230: Human Systems Anatomy

(1 Unit)
This course is a study of the anatomical structure of the human body, from microscopic to gross structures across the organ systems. Of particular importance is: (1) the complementarity of human anatomy structure and function, (2) the interrelationships between organ systems, and (3) the application of anatomical knowledge to common diseases and clinical conditions. *Betz*

## KIN 233: Human Gross Anatomy

(1 Unit)
Prerequisite: KIN 230.
The basic musculoskeletal anatomical concepts related to the human body. Emphasizes applications to physical activity and musculoskeletal injury. Lecture and laboratory (cadaver). *R.Moss.*

## KIN 287: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## KIN 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## KIN 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## KIN 305: Physical Activity Epidemiology

(1 Unit)
Physical Activity Epidemiology will focus on how leisure-time physical activity can be promoted to increase both longevity and quality of life. Students will be introduced to basic epidemiological concepts, the relatively new area of physical activity epidemiology, and the relevant literature that allows public health policy to be created based on the strength of the evidence. This course will examine the impact of physical activity on disease mortality and disease risk factors. By examining both classic and contemporary studies, students will be able to discern how the literature has changed over time and how current public health recommendations are better suited to the population as a whole. *(Betz)*

## KIN 310: Research and Statistics in Kinesiology

(1 Unit)
Qualitative and quantitative research approaches specific to the various disciplinary areas in kinesiology. Topics include research ethics; selecting and developing a research problem; reviewing the literature, developing research hypotheses, writing research proposals; issues in measurement, data collection issues; statistical analyses; and communicating the results of research. *Betz.*

## KIN 313: Cadaver Dissection

(.5 Units)
Prerequisite: Permission of instructor.
This course is designed to provide the foundational components necessary to understand and perform appropriate therapeutic modality methods for physically active individuals. Specific strategies will be utilized to develop and plan systematic and thorough modality protocols. Current literature and techniques in the field will support the content of this course. *B. Moss*

## KIN 315: Sports Nutrition

(1 Unit)
This course involves the study of the effect of nutrient selection, metabolism, and timing to support and improve human performance. Additionally, this course will cover use of ergogenic aids, dietary supplements, and will review the current literature in the field of sports nutrition. *Cousins, Betz, Yocum, Staff.*

## KIN 350: Science of Strength and Conditioning

(1 Unit)
Prerequisites: KIN 233.
Further exploration of the various aspects of exercise testing and prescription, such as risk stratification, cardiorespiratory endurance, muscular strength and endurance, body composition, and flexibility, but with a focus on an athletic population. Covers the physiological mechanisms associated with anaerobic and aerobic conditioning, and muscular and cardiovascular evaluation and conditioning. *Betz.*

## KIN 360: Musculoskeletal Assessment

(1 unit)
Prerequisites: KIN 233
This course will utilize hands-on skills, current literature, and evidence-based practices to understand and perform

orthopedic physical assessments. Assessment skills including palpation, goniometry, manual muscle testing, special tests, and neurological evaluation techniques will be understood and applied in classroom lab setting. Students will learn how to take a patient history, identify signs and symptoms associated with a variety of orthopedic injuries and conditions, and document their findings appropriately. This course provides valuable information and clinical skills for students planning on pursuing careers in the orthopedic health care field. *Hill*

## KIN 368: Biomechanics

(1 Unit)
Prerequisite: KIN 233.
Introduction to the study of biomechanics and its applications to human movement. This course emphasizes both quantitative and qualitative analyses of human movement using basic mechanical principles. *Yocum*

## KIN 369: Human Physiology

(1 Unit)
Prerequisite: KIN 230.
This course focuses on the function of organs and organ systems and how they interact with each other to maintain homeostasis. This course includes three 65-minute lectures and a two hour and twenty-minute lab per week. Lecture and Laboratory. *Betz, Cousins, Staff*

## KIN 379: Exercise Physiology

(1 Unit)
Prerequisite: KIN 369 or permission of instructor.
An examination of the mechanisms and processes by which the body performs its various functions. Emphasis on cardiovascular, respiratory, muscular and nervous systems as they relate to physical activity. This course includes three 65-minute lectures and a two hour and twenty-minute lab per week. Lecture and Laboratory. *Betz, Cousins, Staff.*

## KIN 381: Foundations of Exercise Testing and Prescription

(1 Unit)
Prerequisites: KIN 369
Provides the knowledge and tools to properly conduct various aspects of exercise testing such as the assessment of risk stratification, cardiorespiratory endurance, muscular strength and endurance, body composition and flexibility. Applies these assessments in development of exercise programs and prescriptions for both a general health and fitness population and a clinical population. Emphasizes the American College of Sports Medicine's guidelines for exercise testing and prescription with specific focus on the knowledge, skills and abilities for the Health Fitness Specialist Certification. *Betz, Cousins, Yocum, Staff.*

## KIN 385: Human Physiology Lab

(0.5 Units)
Prerequisites: KIN 369.
This laboratory class will allow students the opportunity to study the fundamental concepts of human physiology—including neural, muscular, cardiovascular, respiratory, and sensory systems—using hands-on experiments and computer simulations. Students will measure and analyze various physiological measures, including EKGs, blood pressure, respiratory volume and reflexes. *Betz.*

## KIN 387: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## KIN 388: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## KIN 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## KIN 391: Internship

(1/2 Unit)
Prerequisite: Permission of department.
Offered on a credit/no credit basis. *Staff.*

## KIN 392: Internship

(1 Unit)
Prerequisite: Permission of department.
Offered on a credit/no credit basis. *Staff.*

## KIN 402: Seminar

(1 Unit)
*Staff.*

## KIN 411: Directed Study

(1/2 Unit)
*Staff.*

## KIN 412: Directed Study

(1 Unit)
*Staff.*

## PH 175: Introduction to Public Health

(1 Unit)
This introductory course provides an overview of the field of public health and its key qualitative and quantitative methods. Students will examine the economic, cultural, and political factors leading to the uneven distribution of health and disease in the United States. Using the lens of structural violence, course materials will focus on how race, socioeconomic status, gender, age, and sexuality determine access to care, quality of care, and even definitions of disease. Special attention will be paid to racialized health practices in the United States. Students will consider the ways that science and technology can be coupled with social science to understand disease trends and improve human health

outcomes. The course also examines the effectiveness of programming and education campaigns aimed at improving health. *Staff*

### PH 185: Colloquium in Public Health

(.25 Unit)
Prerequisite: HCI 175
Discussion of selected topics in ublic health. Using the lens of structural violence, course materials will focus on how race, socioeconomic status, gender, age, and sexuality determine access to care, quality of care, and even definitions of disease. Students read selected associated materials, attend presentations, and actively participate in discussions on matters related to public health. *Staff*

## Law, Justice, and Society

### LWJS 101: Introduction to Law, Justice, and Society

(1 Unit)
Explores the basic issues of law's relationship to contemporary society. Topics include the nature as well as historical and social functions of law; the culture and role of major legal actors in the legal system (e.g., lawyers, judges, juries, police, technology); the tension between ideals and realities in law; and the role of law in addressing contemporary social problems. Fosters analytical and critical skills. Serves as the gateway class to the concentration in law, justice, and society; however, registration is open to all interested students. *Rose.*

### LWJS 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

### LWJS 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

### LWJS 401: Seminar

(1/2 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
*Staff.*

### LWJS 402: Seminar

(1 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
*Staff.*

### LWJS 411: Directed Study

(1/2 Unit)
*Staff.*

### LWJS 412: Directed Study

(1 Unit)
*Staff.*

## Liberal Arts

For further information about these courses, refer to the core requirement section in this catalog under Academics at Albion College. Specific course descriptions of LA 101 seminars are available from the First-Year Experience Web page.

### LA 101: First-Year Seminar

(1 Unit)
An interdisciplinary special topics seminar that emphasizes development of strong written and oral communication. Seminars help first-year students make a positive transition to college academics by focusing on the process of learning, in and out of the classroom. Seminars share a common weekly community meeting that emphasizes student academic and social transitions. Some travel is associated with many seminars. A course fee may apply. Open only to first-year students. *Staff.*

### LA 112: Albion Community and Culture

(.25 unit)

## Mathematics

Initial course placements in mathematics and computer science are generally determined by the Mathematics Placement Test. After students take their first course, they must take courses in sequence as determined by the departmental prerequisites. Any exceptions must be approved by the course instructor and department chair.

### DA 101: Intro to Data Analytics

(1 Unit)
An introduction to the foundations of data science, including analysis and representation. Topics will include data collection and cleaning, programming languages, basic statistics, data visualization, ethical concerns, and applications of data science in a variety of career fields. *Staff*

### MATH 100: Mathematics Essentials

(1 Unit)
Prerequisite: Appropriate score on the mathematics placement assessment and permission of department.
A review of the basics from elementary algebra; absolute value equations and inequalities; radical and rational exponents; completing the square; the discriminant; quadratic inequalities; equations of lines; systems of equations; functions, polynomials and factoring, inverses and their graphs; word problems; exponential and logarithmic functions. Emphasizes simplifying expressions, solving equations, and graphing functions, including linear, quadric, polynomial, rational, radical, exponential and logarithmic. Problem solving and mathematical modeling will be integrated throughout. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff*

## MATH 104: Mathematics for Elementary Teachers

(1 Unit)
Prerequisite: MATH 100 or placement evaluation at the MATH 120 level or higher.
Priority given to students in the elementary education program. An investigation of mathematics (arithmetic, geometry, algebra, problem solving) for elementary school teachers. Topics are selected from: sets, relations and functions; numeration systems; whole numbers and their operations; number theory; rational numbers and fractions; decimals and real numbers; geometry and measurement; and probability and statistics. Emphasizes doing mathematics, using manipulatives, and developing intuition and problem-solving skills. Laboratory. *Bollman.*

## MATH 119: Finite Mathematics for Decision Making

(1 Unit)
Prerequisites: 2.0 or higher in Math 100 or appropriate score on the mathematics placement assessment.
An introduction to discrete mathematics. Applications are drawn from diverse areas including biological sciences, economics, political science and personal finance. Topics typically include graph theory, management science, statistics, the mathematics of social choice, game theory and the logical foundations of mathematics. Investigation and creation of mathematical models. Intended for non-majors. *Staff.*

## MATH 120: College Algebra

(1 Unit)
Prerequisites: 2.0 or higher in MATH 100 or equivalent, or appropriate score on the mathematics placement assessment.
A modern, unified approach to algebra and analytical geometry based on the concept of a function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Together with MATH 127 , serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of algebra, trigonometry and logarithms should elect MATH 141 in place of MATH 120. A graphing calculator is required. Not open to students who have completed MATH 125 . A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff*

## MATH 123: Mathematics for the Liberal Arts

(1 Unit)
Prerequisite: Permission of department.
A study of selected topics in mathematics drawn from among algebra, geometry, statistics, probability, discrete mathematics, and other fields of mathematics as determined by the instructor. *Staff.*

## MATH 125: Precalculus

(1 Unit)
Prerequisite: 2.0 or higher in Math 100 or appropriate score on teh mathematics placement assessment.
A modern, unified approach to algebra, trigonometry, logarithms and analytical geometry based on the concept of a function. Linear equations and inequalities, quadratic equations and inequalities, polynomials and rational functions, logarithms and exponential functions, trigonometric and inverse trigonometric functions, and analytic geometry (the circle, the parabola, the ellipse and the hyperbola) are normally covered. Emphasizes the use of graphing calculators and the use of mathematics as a problem-solving tool. Covers applications in natural science, social science and business. Serves as a preparation for calculus. Well-prepared students who already have a strong working knowledge of

algebra, trigonometry and logarithms should elect MATH 141 in place of Mathematics 125. A graphing calculator is required. Not open to students who have completed Math 120. *Staff.*

## MATH 127: Trigonometry

(.5 Unit)
Prerequisites: 2.0 or higher in MATH 120 or equivalent, or appropriate score on the mathematics placement assessment.
Topics covered include the definition of trigonometric functions, graphs of the trigonometric functions, trigonometric identities, solving trigonometric equations, utilizing polar coordinates, and vector applications & operations. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff*

## MATH 136: Applied Linear Algebra

(.5 Unit)
An introduction to linear algebra and its application emphasizing the use of computational software. Topics will include vectors, matrices, matrix operations and decompositions, Gaussian elimination, and eigenvalues. Applications of linear algebra will include least squares approximations, solving systems of equations, and time permitting, special topics. *Ash*

## MATH 141: Calculus of a Single Variable I

(1 Unit)
Prerequisite: 2.0 or higher in MATH 120 (College Algebra) AND concurrent enrollment in MATH 127 (Trigonometry); or 2.0 or higher in MATH 125 (Precalculus); or appropriate score on the mathematics placement assessment.
MATH 141 and MATH 143 constitute a thorough introduction to calculus for students who intend to continue in mathematics and for those who will use calculus in other fields such as science and engineering. Second half of the standard one-year calculus sequence (see MATH 141 above). MATH 141 covers limits, continuity, derivatives and a brief introduction to integration, as well as applications to problems in related rates, optimization, solid geometry and elementary mechanics. Requires a strong working knowledge of algebra and trigonometry. Students who are weak in these areas should elect MATH 125. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 143: Calculus of a Single Variable II

(1 Unit)
Prerequisite: MATH 141 or permission of department.
Mathematics 143 covers techniques of integration, applications of the integral, simple differential equations with their associated mathematical models, and sequences and series. Requires a strong working knowledge of algebra, trigonometry, derivatives, and some familiarity with integration, including Riemann sums and the Fundamental Theorem of Calculus. Students with a calculus background who are weak in these areas should elect MATH 141. A graphing calculator is required. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Staff.*

## MATH 209: An Introduction to Statistics

(1 Unit)
Prerequisite: 2.0 or higher in MATH 100 or appropriate score on the mathematics placement assessment.
Statistics is the art/science of collecting and interpreting data. Topics include probability, probability distributions

which include the binomial and normal distributions, the central limit theorem, sampling distributions, confidence interval estimation, and hypothesis testing. Students will then advance to linear regressions, goodness-of-fit tests, and analysis of variance. Emphasis is placed on multiple applications in the life and social sciences. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson, Bollman.*

## MATH 239: Discrete Structures

(1 Unit)
Prerequisite: MATH 141.
A survey of discrete mathematics with topics selected from set theory, functions and relations, number theory, combinatorics, graph theory, logic (predicate calculus, quantifiers), introduction to proof techniques, and probability. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Kamischke.*

## MATH 245: Multivariate Calculus

(1 Unit)
Prerequisite: MATH 143.
Vectors, inner and cross products, and vector-valued functions including parametric represetations of curves and surfaces in space. Partial differentiation, the chain rule, function gradients, implicit differentiation, multivariate optimization, Lagrange multipliers, multiple integrals and vector analysis, including divergence and curl of vector fields, as well as the theorems of Green, Stokes and Gauss. *Mason.*

## MATH 247: Differential Equations and Linear Algebra

(1 Unit)
Prerequisite: MATH 245.
First-order differential equations and numerical algorithms of Euler and Runge-Kutta. Linear algebraic systems, Gaussian elimination, row-echelon form matrix algebra, inverses and determinants. Vector spaces, subspaces, linear independence, bases, span, dimension, linear mappings and function spaces. Second and higher-order linear differential equations. Eigenvectors, eigenvalues and spectral decomposition methods. First-order linear differential systems, including solutions methods using matrix exponentials. Applications focus on problems in physics, chemistry, biology, economics and engineering. Additional topics may include nonlinear dynamical systems, stability theory, transform theory and power series solutions. *Mason.*

## MATH 250: Problem Solving Seminar

(1/4 Unit)
Prerequisites: MATH 141 and permission of instructor
An examination of problem-solving strategies from all areas of mathematics, with particular emphasis on mathematics competition problems. Students will participate in the Michigan Autumn Take-Home Challenge and William Lowell Putnam Mathematical Competition. Fall semester only; may be repeated for credit up to one full unit of credit. CR/NC only *(Bollman)*

## MATH 257: Mathematics of the Gaming Industry

(1/4 Unit)
Permission of instructor. Open to department majors and minors only.
A detailed study of probability as applied to games of chance. Students will have the opportunity to compare theory and practice through classroom experiments and travel to casinos. CR/NC only. *Bollman*

## MATH 275: Introduction to Solid Mechanics

(1 Unit)
Prerequisites: PHYS 167 and PHYS 168; MATH 245.
Statics: Forces, moments and couples; equilibrium of particles and rigid bodies; trusses and frames; distributed loads; Friction. Mechanics: Stress/strain, classification of material behavior, generalized Hooke's law. Engineering applications: Axial loads, torsion of circular rods and tubes, bending and shear stresses in beams, deflection of beams, combined stresses, stress and strain transformation, Mohr's circle, elastic stability/buckling of columns. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. Same as Physics 275. *Mason.*

## MATH 299: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisite: MATH 143 or CS 173.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation and a paper on a mathematics/computer science topic of personal interest. Same as CS 299. Staff.

## MATH 309: Mathematical Statistics

(1 Unit)
Prerequisite: MATH 245.
MATH 247 is recommended. A mathematical study of probability distributions, random sampling, and topics selected from statistical theory: estimation, hypothesis testing and regression. A minimum grade of 2.0 is required in any mathematics course used as a prerequisite for another mathematics course. *Anderson.*

## MATH 311: Regression and Time Series Models

(1 Unit)
Covers two topics in detail: multiple linear regression analysis and time series analysis. Inherent to both topics: parsimonious linear models, parameter estimation, diagnostic checking, and forecasting. Uses the matrix approach for multiple linear regression, and the Box-Jenkins methodology for constructing autoregressive-integrated moving average (ARIMA) models for time series analysis. Employs the statistical package MINITAB for analyzing all real-world data sets. *Anderson.*

## MATH 312: Mathematical Theory of Interest

(1 Unit)
Prerequisite: MATH 141
Foundations of interest and discount rates; present/future value of cash flow including annuities, loans, bonds, and other investments; returns on investment; measures of duration and convexity; concepts of portfolio immunization. Applications to a wide variety of practical problems including student loans, car loans, home mortgages, and investment bonds. *Staff*

## MATH 313: Financial Mathematics for Actuaries

(1 Unit)
MATH 209 or MATH 309 MATH 247
Introduction to mathematics of financial derivatives in discrete time. Risk-neutral/arbitrage-free modeling of risky

securities including options, forwards, futures, and swaps.  Emphasis on single and multi-period Arrow-Debreu models and discrete-time stochastic processes with applications to actuarial mathematics. *Mason*

## MATH 316: Numerical Analysis

(1 Unit)
Prerequisites: MATH 247 and CS 171.
Methods of obtaining numerical solutions to mathematical problems. Stresses the implementation and error analysis of algorithms. Topics include solution of non-linear equations, systems of equations, interpolating polynomials, numerical integration and differentiation, numerical solution to ordinary differential equations, and curve fitting. Offered in alternate years. Same as CS 316. *Mason.*

## MATH 326: Operations Research

(1 Unit)
Prerequisites: MATH 247.
An introduction to computational methods in mathematical modeling including linear programming and Markov chains. Applications in business, economics and systems engineering. Knowledge of probability is helpful. Offered in alternate years. Same as CS 326. *Mason.*

## MATH 331: Real Analysis

(1 Unit)
Prerequisites: MATH 245 and MATH 239.
A study of the concepts underlying calculus of a single variable: The completeness property of the real number system, convergence, continuity, properties of elementary functions, the derivative and the Riemann integral. *Bollman.*

## MATH 333: Complex Analysis

(1 Unit)
Prerequisites: MATH 239 and MATH 245.
An introduction to complex variable theory. Specific topics to be covered include elementary and analytic functions, differentiation and integration in the complex plane, series representations, residues and poles, transform theory, and conformal mapping. Offered in alternate years. *Bollman.*

## MATH 335: Abstract Algebra

(1 Unit)
Prerequisites: MATH 239 and MATH 247.
Properties of the integers, real number system and other familiar algebraic entities are viewed abstractly in structures such as groups, semigroups, rings and fields. Homomorphisms and isomorphisms (functions compatible with the algebraic operations) illuminate the underlying similarities among these structures. Students will develop their skills in mathematical writing and presentations. *Bollman.*

## MATH 342: Geometry

(1 Unit)
Prerequisites: MATH 143 and MATH 239.
The logical foundation of Euclidean geometry, including the axiom systems of Euclid and Hilbert, and their philosophical implications. An introduction to hyperbolic, elliptic and projective geometry. Employs software such as Geometer's Sketchpad to illustrate course topics. *Bollman.*

## MATH 345: History of Mathematics

(1 Unit)
Prerequisite: MATH 141.
A study of the history and evolution of mathematical ideas and their significance, from approximately 3500 B.C.E. to the present. Topics include number systems, arithmetic, Euclidean and non-Euclidean geometry, algebra, calculus, probability, number theory and applied mathematics. Offered in alternate years. *Bollman.*

## MATH 349: Advanced Linear Algebra

(1 Unit)
Prerequisites: MATH 239 and MATH 247.
A continued study of linear algebra as begun in MATH 247. Topics may include abstract vector spaces, dimension, normed linear spaces, inner product spaces, canonical forms, unitary and Hermitian matrices, factorization, eigenvector analysis, and infinite-dimensional spaces. Offered in alternate years. *Bollman.*

## MATH 358: Foundations of Computing

(1 Unit)
Prerequisites: MATH 239 and CS 171
The theoretical underpinnings of computer science: models of computation including automata, Turing machines, circuits, the Chomsky language hierarchy, Church's thesis, computable and noncomputable functions, recursive and recursively enumerable sets, reducibility and introduction to complexity theory. Same as CS 358 . *Jordon.*

## MATH 360: Mathematical Modeling

(1 Unit)
Prerequisites: MATH 247 and CS 171.
An introduction to analytical methods in mathematical modeling, including nonlinear optimization, dynamical systems and random processes. Applications in physics, biology, economics and systems engineering. Knowledge of probability and statistics is helpful. Same as CS 360. *Mason.*

## MATH 368: Topology

(1 Unit)
Prerequisites: MATH 239 and MATH 245.
An introduction to the basic concepts of point set topology. Fundamental concepts of topological spaces including open and closed sets, limit points, continuous functions, as well as the product, subspace, metric, and quotient topology. Connectedness and compactness with applications to the real line. Countability and separation axioms including Hausdorff, Regular, and Normal spaces. Urysohn's Lemma and Metrization Theorem. Tychonoff's Theorem. Topics from algebraic topology if time permits. Urysohn's Lemma and Metrization Theorem. Tychonoff's Theorem. Topics from algebraic topology if time permits. *Mason, Bollman.*

## MATH 370: Partial Differential Equations

(1 Unit)
Prerequisites: MATH 239 and MATH 247.
MATH 331 recommended. A study of the theory and applications of partial differential equations (PDEs). Linear and nonlinear PDEs, including quasilinear first order equations, conservation laws, discontinuous solutions, classification of PDEs, wave propagation in multiple space dimensions, Fourier analysis and separation of variables, Sturm-Liouville

theory, fundamental solutions for equations of parabolic and elliptic type, including the maximum principle. Applications in biology, chemistry, engineering and physics. Offered in alternate years. *Mason.*

### MATH 380: Mathematical Physics

(1 Unit)
Same as PHYS 380. *Staff.*

### MATH 399: Colloquium in Mathematics and Computer Science

(1/4 Unit)
Prerequisites: MATH 299 and senior standing.
Selected topics in mathematics and computer science as presented by students, departmental faculty and visiting speakers. Requirements include written summaries of each presentation, a departmental major assessment examination and an oral presentation on a mathematics/computer science topic of personal interest. Offered only on a credit/no credit basis. Same as CS 399. *Staff.*

## Modern Languages and Cultures

### MLAC 110: Language-Learning Residency and Participation in Programs

(1/4 Unit)
Includes residency in language-learning housing for one semester and active participation in weekly programs in the student's respective living area as well as in cultural events. *Staff.*

### MLAC 207: Race, Ethnicity and Diaspora in Latin America and the United States

(1 Unit)
This course explores the interconnected histories and cultures of Latin American nations and the United States. Special attention will be paid to the history, artistic production, and political movements of Indigenous populations, the African Diaspora, and immigrant groups throughout the Americas. *Staff.*

### MLAC 305: Intercultural Understanding and Global Issues

(1 Unit)
Explores theoretical models of how cultures are derived and what it means to interact across cultural boundaries. Applies these theoretical models to selected global issues in order to demonstrate the potentialities and hazards of negotiation of global issues across borders. Useful for pre-professional students who want to attain the skills and knowledge to effectively function in an international/intercultural context. Taught in English. *Myers*

### MLAC 345: Methods of Teaching Modern Languages and Cultures

(1 Unit)
Explores the role and purpose of the American educational system as it relates to foreign language teaching; teaches active learning strategies grounded in proficiency-oriented language instruction; allows students to begin to realize their potential as foreign language teachers. *Staff.*

### MLAC 411: Directed Study

(1/2 Unit)
Prerequisite: Permission of department chair.
*Staff.*

### MLAC 412: Directed Study

(1 Unit)
Prerequisite: Permission of department chair.
*Staff.*

## Music

Students performing in ensembles have the option of electing them for credit or not for credit. If credit registration would cause the unit enrollment to exceed four and one-half, the student may elect an audit registration, for which no fee will be assessed. Up to two units of ensemble credit may be included among the total required for graduation.

### MUS 100: Music Major Seminar

(0 Units)
Prerequisite: Open only to music majors.
Designed to provide declared music majors with a broad range of music listening and music performance experiences in order to develop the skills and characteristics necessary to be informed, successful and fulfilled as a well-rounded musician and educated audience member. Offered on a credit/no credit basis. *Staff.*

### MUS 101: Theory I

(1 Unit)
Prerequisite: Open only to music majors, or with permission of instructor.
An introduction to Western musical language through studies in fundamentals (key signatures, intervals, scales, rhythmic notation, etc.), chordal and melodic structures, and basic four-part harmonization. Focuses on intensive training in sight-singing (with solfege) and ear-training activities, an introduction to music software for notation and ear training, and development of keyboard proficiency through participation in a required weekly keyboard laboratory. Keyboard laboratory sessions concentrate on basic reading and harmonization skills at the keyboard, as well as development of the technical ability to perform elementary repertoire. Lecture and keyboard laboratory. *Jensen-Abbott.*

### MUS 102: Theory I

(1 Unit)
Prerequisite: MUS 101 or advanced placement by means of a departmental examination.
A continuation of studies begun in MUS 101, with emphasis on further exercises in and analysis of four-part harmonization, secondary chord function, musical form and exercises in stylized composition. Sight-singing, ear-training and technology application continue. Keyboard laboratory sessions continue to develop reading, harmonization, and basic theory skills as related to piano playing. Further development of technical skills allows the study of early intermediate repertoire. Lecture and keyboard laboratory. *Jensen-Abbott.*

### MUS 104: Gateway to Music

(1 unit)
This course will introduce students to the study of basic structural elements of music through analytic listening, notation, composition and in-class performance. Basic elements of music reading will be introduced. Musical examples

will be drawn from a variety of styles: Western, classical, jazz/blues, rock/pop/R&B, and world music styles. *Parr, Staff*

## MUS 110: Rock-and-Roll in Society

(1 Unit)
Study of the origins, characteristics and stylistic development of rock-and-roll music from the early 1950s to the present through the frameworks of race, gender/ethnicity, politics, and popular culture. Designed for the non-music major. Course fee. *McIlhagga.*

## MUS 111: Music Appreciation

(1 Unit)
Designed for the non-music major who wishes to gain an appreciation of music as a fine art. The musical elements of style, form and design are investigated primarily through listening. Not open to music majors. *Staff.*

## MUS 113: Introduction to Opera

(1 Unit)
An introductory course designed for both the music major and non-major. Concentrates on the most frequently performed operas of Mozart, Puccini, Verdi and Wagner. Extensive use of video tapes of opera performances with sub-titles. Offered in alternate years. *Balke.*

## MUS 120: Music Performance as a Creative Process

(1 Unit)
Corequisites: MUS 121, MUS 122, MUS 124, MUS 125, MUS 131 or MUS 132.
Designed to give students the tools necessary to think, discuss and write critically about music both within and outside of their respective ensemble "labs." Through reading, writing and listening assignments, students will become more aware of the elements involved in musical interpretation. *McIlhagga.*

## MUS 133: Opera Workshop

(1/2 Unit)
Provides opportunity for involvement in the production of operas or opera scenes from auditions through performance. Covers all aspects of opera from vocal roles to technical support. Offered in alternate years. *Staff.*

## MUS 137: Piano Chamber Music Ensemble

(1/4 Unit)
Prerequisites: Music major and permission of instructor.
Develops ensemble skills for pianists playing in duos with a second pianist or in mixed ensembles such as trios for piano and strings, etc. Topics include balance, rhythmic precision and pedaling, as well as overall phrasing and interpretation. *Abbott, Jensen-Abbott.*

## MUS 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## MUS 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## MUS 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## MUS 192: Guitar Class I

(1/4 Unit)
Basic development of both classical and plectrum guitar skills. Intended for students with little or no previous training. No applied music tuition fee charged. *Palmer.*

## MUS 193: Guitar Class II

(1/4 Unit)
Prerequisite: MUS 192 or permission of instructor.
A continuation in the development of music reading skills using easy classical, traditional tunes and technical exercises. No applied music tuition fee charged. *Palmer.*

## MUS 194: Guitar Class III

(1/4 Unit)
Prerequisite: MUS 193 or permission of instructor.
A continuation of MUS 193. No applied music tuition fee charged. *Palmer.*

## MUS 201: Theory II

(1 Unit)
Prerequisite: MUS 102 or permission of instructor.
A continuation of the studies begun in MUS 101 and MUS 102 with a special emphasis on chromatic harmony. A further study of form and exercises in stylized composition. Sight-singing and ear-training continue. *Jensen-Abbott.*

## MUS 202: Theory II

(1 Unit)
Prerequisite: MUS 201 or permission of instructor.
A continuation of the studies begun in MUS 101, MUS 102 and MUS 201 with a special emphasis on form. An introduction to the materials and techniques of twentieth and twenty-first-century music. Sight-singing and ear-training continue. A major analysis paper is required. *Jensen-Abbott.*

## MUS 203: Foundations of Music 1

1 Unit
Prerequisites: MUS 104 with a grade of 2.0 or higher or by departmental permission
Corequisites: MUS 203L based on audition or permission of instructor
A continuation of the study of Western musical language through music fundamentals (key signatures, scales, intervals,

rhythmic notation, etc., species counterpoint, melodic structure and embellishment, diatonic chord function and basic four-part harmonization). In addition, chordal part-writing will concern much of this semester's work. Written examinations, compositional exercises, sight-singing and ear training will constitute a significant portion of this course, as well as composition projects. *Staff*

## MUS 203L: Keyboard Skills Foundations 1

(0 units)
Prerequisites: MUS 104 with a grade of 2.0 or higher or by departmental permission
Corequisites: MUS 203 based on audition or permission of instructor
A supplemental skills course to the Foundations I written course. Piano skills are a necessary part of most musicians' lives in some capacity, and this course will provide you with a basic knowledge of fundamental technique, repertoire, harmonization skills, ensemble playing, chord progressions, and sight reading. *Staff*

## MUS 204: Foundations of Music 2

1 Unit
Prerequisites: MUS 203 with a Grade of 2.0 or higher
Corequisites: MUS 204L based on audition or permission of instructor
The study of western and non-western musical language beyond music fundamentals. By developing an understanding of tonal and non-tonal musical language through melodic structure, chromatic chord structures, embellishment patterns, tonal progressions, counterpoint, part-writing, composition, sight-singing, and dictation activities, students will be able to hear, sing, improvise, and compose tonal and non-tonal progressions. Furthermore, students will begin to experience chromatic harmonic tendencies, modes and other scale structures, as well as engage with cross-historical references to a diversity of musical genres in their listening, singing, and writing activities. *Staff*

## MUS 204L: Keyboard Skills Foundations 2

(0 units)
Prerequisites: MUS 203 with a Grade of 2.0 or higher or by departmental permission
Corequisites: MUS 204
As a supplemental skills course to the Foundations II written music theory course. Piano skills are a necessary part of most musicians' lives in some capacity, and this course will provide you with a basic knowledge of fundamental technique, repertoire, harmonization skills, ensemble playing, chord progressions, and sight reading. *Staff*

## MUS 205: Jazz Improvisation

(1 Unit)
Prerequisite: MUS 101 recommended.
An introduction to the art and craft of jazz improvisation through a study of the theoretical, historical, philosophical and aesthetic factors surrounding its past, present and future performance practice. Course material is designed to develop thinking and reacting skills needed for performance through assignments in repertoire, scales, keyboard harmony skills and melodic patterns. Offered in alternate years. *Ball.*

## MUS 207: Music and Our Society

1 unit
Prerequisites: MUS 104 or equivalent musical experience with instructor permission.
An introduction to the various ways in which music and our society are connected, and how musical compositions and performances can influence (and be influenced by) social, political, economic, technological, and other developments in our society. Open to all majors. *Kim*

## MUS 216: Piano Literature

(1/2 Unit)
An historical, melodic, and harmonic overview of some of the major piano works by the most significant composers of the seventeenth through twenty-first centuries. Designed to enhance a music major's understanding of works considered to be the standards in piano and chamber music. Offered in alternate years. *Jensen-Abbott.*

## MUS 217: Instrumental Literature

(1/2 Unit)
An historical, melodic, and harmonic overview of some of the major instrumental musical works by the most significant composers of the seventeenth through twenty-first centuries. Designed to enhance a music major's understanding of works considered to be the standards in orchestral, band and chamber music. Offered in alternate years. *McIlhagga.*

## MUS 218: Choral Literature

(1/2 Unit)
An historical, melodic, and harmonic overview of some of the major choral works by the most significant composers of the seventeenth through twenty-first centuries. Designed to enhance a music major's understanding of works considered to be the standards in choral music. Offered in alternate years. *Parr.*

## MUS 220: Diction for Singers

(1/2 Unit)
A concentrated course on the basics of the International Phonetic Alphabet (IPA) including application of this system to the correct stage pronunciation and artistic performance of standard classical solo repertoire (art song, opera) in English, Italian, German and French. *Balke.*

## MUS 221: Diction for Singers

(1 Unit)
A concentrated course on the basics of the International Phonetic Alphabet (IPA) including application of this system to the correct stage pronunciation and artistic performance of standard classical solo repertoire (art song, opera) in English, Italian, German and French. *Balke.*

## MUS 230: Introduction to Conducting

(1/2 Unit)
Prerequisite: MUS 204 or permission of instructor.
Fundamentals of conducting vocal and instrumental ensembles. (1) basic beat patterns; (2) score analysis; (3) instrument and voice ranges and transpositions; and (4) some practical aspects of rehearsing. Lecture and laboratory. *Staff*

## MUS 240: Brass Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all brass instruments including trumpet, French horn, trombone, euphonium and tuba. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Otto.*

## MUS 242: Woodwind Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all woodwind instruments including flute, oboe, clarinet, bassoon and saxophone. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Miller.*

## MUS 244: Stringed Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all bowed string instruments including violin, viola, cello, and string bass. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Abo.*

## MUS 246: Percussion Teaching and Techniques

(1/2 Unit)
Provides practical methods in the teaching and playing techniques of all percussion instruments including snare drum, timpani, mallet instruments, as well as most other percussion instruments utilized in an instrumental ensemble. Primarily intended for students pursuing their teacher certification in music. A secondary instrument lab ensemble is also a corequisite for this course. Offered in alternate years. *Wulff.*

## MUS 287: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## MUS 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## MUS 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## MUS 298: Women and Music

(.5 Unit)
Prerequisites: MUS 104 or Permission of Instructor
This class is open to students from all academic majors, and will explore the role of women and music in all aspects. Specifically, we will consider women's work as composers, performers, teachers, patrons, audience members, and as philanthropists and social activists across simultaneous western and global music histories. Critical engagement of women's issues such as representation of women in musical works, feminist aesthetics, and the roles of gender in the entertainment industry will focus all class discussions/listening activities. A historical overview of western art music and the limitations/opportunities for women will give rise to global roles of women in music, as well as current popular/entertainment roles for women. *Jensen-Abbott*

## MUS 303: Foundations of Music 3

1 Unit
Prerequisites:  MUS 204 with a grade of 2.0 or higher
The study of western and non-western musical historical periods, genres, and styles. By developing an understanding of tonal and non-tonal musical language through listening, critical score analysis, as well as performance and scholarly research activities, students will be able to hear and critically discuss distinct musical styles and catalogue/describe them into appropriate generic, chronological, and structural categories. Students will also engage with cross-historical references to a diversity of musical genres in their listening, performing, and writing/research activities. *Staff*

## MUS 313: Music History I

(1 Unit)
Prerequisite: MUS 201 or permission of instructor.
A course in the history of music designed for junior and senior music majors. Covers music from the ancient Greeks through the seventeenth century. In addition to regular examinations, assignments stress stylistic characteristics of a period or of an individual composer. There is assigned listening. *Abbott.*

## MUS 314: Music History II

(1 Unit)
Prerequisite: MUS 201 or permission of instructor.
A continuation of MUS 313 covering music from the eighteenth century to the present. In addition to examinations and analysis assignments, students complete a major research paper by the end of the semester that investigates some aspect of contemporary Western music or deal with non-Western music. *Abbott.*

## MUS 319: Evolution of Jazz

(1 Unit)
An exploration of the rich cultural background and evolution of jazz music through discussion of important performers, composers, educators and critics with respect to their contribution to the development of the art form. Emphasis is placed on developing critical listening skills through the extensive use of landmark recordings and live performances. Offered in alternate years. *Ball.*

## MUS 322: Teaching of Instrumental Music in the Schools

(1 Unit)
Prerequisite: MUS 230.
Required of all instrumental music education majors. Designed to acquaint the student with all aspects of teaching, developing, planning, directing and administering public school instrumental music programs, K-12. Offered in alternate years. *McIlhagga.*

## MUS 325: Teaching of Music in the Elementary School

(1 Unit)
Prerequisite: MUS 230.
Designed to give the student a knowledge of a well-rounded music program for the elementary grades. Creative experiences, demonstrations and practical work in performing and listening are stressed. Lecture and laboratory. Offered in alternate years. *Root.*

## MUS 328: Teaching of Choral Music in the Secondary School

(1 Unit)
Prerequisite: MUS 230; MUS 330 is strongly recommended.
An introduction to all aspects of the music program for the secondary school and the techniques for administering the program. Lecture and laboratory. It is strongly recommended that Music 330 (Choral Conducting) be elected prior to 328. Offered in alternate years. *Parr.*

## MUS 330: Choral Conducting

(1/2 Unit)
Prerequisite: MUS 230.
Laboratory work in choral conducting and score reading with practical experience in techniques of training choral ensembles. Required of all choral music education majors. Offered in alternate years. *Parr.*

## MUS 331: Instrumental Conducting

(1/2 Unit)
Prerequisite: MUS 230.
Laboratory work to develop techniques and skills required for instrumental conducting and score reading. Students may be given the opportunity to conduct instrumental ensembles on campus. Required of all instrumental music education majors. Offered in alternate years. *Ball.*

## MUS 387: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## MUS 388: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## MUS 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## MUS 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

## MUS 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

## MUS 401: Seminar

(1/2 Unit)
*Staff.*

### MUS 402: Seminar

(1 Unit)
*Staff.*

### MUS 411: Directed Study

(1/2 Unit)
*Staff.*

### MUS 412: Directed Study

(1 Unit)
*Staff.*

## Music: Ensembles

### MUS 121: Marching Band/Symphonic Band

(1/4 Unit)
Open to all wind or percussion students by audition. Auditions are held one week prior to the beginning of the fall semester during pre-season rehearsals. After marching season, students continue in symphonic band until the end of the semester. *McIlhagga.*

### MUS 122: Symphonic Wind Ensemble

(1/4 Unit)
Available for all woodwind, brass, and percussion students. Admission is by audition given during November and/or the first week of the spring semester. *McIlhagga.*

### MUS 123: Jazz Combo

(1/4 Unit)
Prerequisite: Permission of instructor.
Available to student instrumentalists and singers interested in performing in a combo setting within the jazz idiom. Rehearsals are by arrangement. *Ball.*

### MUS 124: Jazz Ensemble

(1/4 Unit)
Available to wind and percussion students interested in playing all styles of jazz. Admission is by audition given during the first week of classes. *Ball.*

### MUS 125: Symphony Orchestra

(1/4 Unit)
Open to all students by audition. Auditions are held the first week of each semester; students should bring one prepared solo. *Ball.*

## MUS 126: Chamber Music

(1/4 Unit)
THis course develops effective rehearsal techniques and engaging performance skills of chamber music. Permission of instructor required. Permission of instructor required. *Staff.*

## MUS 127: Woodwind Ensembles

(1/4 Unit)
Prerequisite: Permission of instructor.
Available for woodwind students who are interested in performing chamber music from all periods. Rehearsals are by arrangement. *Staff.*

## MUS 128: Brass Ensembles

(1/4 Unit)
Prerequisite: Permission of instructor.
Available for brass students who are interested in performing brass chamber music. Rehearsals are by arrangement. *Staff.*

## MUS 129: Percussion Ensemble

(1/4 Unit)
Prerequisite: Permission of instructor.
Available for percussion students who are interested in playing music for percussion. Rehearsals are by arrangement. *Wulff.*

## MUS 130: Guitar Ensemble

(1/4 Unit)
Prerequisite: Permission of instructor.
Open to all guitar students who are interested in performing chamber music. Rehearsals are by arrangement. *Palmer.*

## MUS 131: Concert Choir

(1/4 Unit)
Open to all students by audition. Auditions are held during the first four days of classes in the fall. *Parr.*

## MUS 132: Briton Singers

(1/4 Unit)
Members are selected from the Concert Choir by audition during the first week of classes in the fall. *Parr.*

## MUS 138: Brazilian Drumming

(.25 unit)
A study of the origins and development of Brazil's national rhythm through hands on learning and listening. The course focuses specifically on the various percussive instruments that make up a standard samba ensemble. No previous drumming experience is necessary. *Staff*

# Neuroscience

## NEUR 241: Fundamentals of Behavioral Neuroscience

(1 Unit)
Prerequisite: PSYC 101 or permission of instructor.
An introduction to brain structure and function. Emphasis on the way the nervous system is organized to process information, construct representation of the world and generate adaptive behavior. Lecture, discussion, dissection. Same as PSYC 241. *Jechura, Keyes, Wilson.*

## NEUR 242: Fundamentals of Cellular and Molecular Neuroscience

(1 Unit)
Prerequisites: NEUR 241 and BIOL 195, or permission of instructor.
An introduction to neuroscience with emphasis at the cellular and molecular levels. Covers structure and function of neurons and glial cells, electrical and chemical synapses, neurotransmitters, aspects of vision, axon guidance and outgrowth, energy metabolism in the brain, and the hormones and brain regions that affect eating activity and behavior. *Albertson.*

## NEUR 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

## NEUR 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

## NEUR 401: Seminar

(1/2 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
*Staff.*

## NEUR 402: Seminar

(1 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
*Staff.*

## NEUR 411: Directed Study

(1/2 Unit)
*Staff.*

### NEUR 412: Directed Study

(1 Unit)
*Staff.*

## Philosophy

### PHIL 101: Introduction to Philosophy

(1 Unit)
A study of the basic methods, controversial problems and philosophical systems, with special consideration given to the relation of philosophy to other disciplines. Because of the central role of argument and evidence in philosophical inquiry, this course is an introduction to conceptual clarification, logical analysis and general critical thinking. Examines topics such as knowledge and skepticism, the mind-body problem, personal identity, moral relativism, moral responsibility, free will and determinism, power, social justice, racism, sexism, violence, war, the existence of God, the existence of theoretical entities. *Kirby, Mittag.*

### PHIL 102: Philosophy East and West

(1 Unit)
Compares different schools of eastern philosophy with those of western philosophy in their approaches to important epistemological, metaphysical and ethical issues. These issues include, for example, the nature of the self and its relation to the external world; personal identity; and determinism, free will and moral responsibility. Covers similarities and differences in the philosophical questions asked, arguments given and methodologies adopted by both eastern and western philosophers. *Madhok.*

### PHIL 107: Logic and Critical Reasoning

(1 Unit)
A study of the basic conceptual tools used to recognize, evaluate and express arguments. Designed for the student who wishes to reason more effectively and critically. Topics: inductive and deductive standards, truth, validity, fallacies, paradoxes, regresses, counterexamples, analogies, reductios, definitions, sophistries. *Mittag.*

### PHIL 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### PHIL 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### PHIL 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## PHIL 201: Ethics

(1 Unit)
An examination and evaluation of the major ethical theories, both classical and contemporary, and the application of these theories to a current moral problem. *Madhok.*

## PHIL 202: Social Philosophy

(1 Unit)
An issues and historically oriented introduction to a broad range of philosophical subject matter and methodologies through a clarification and analysis of argumentation used to justify selected social and political institutions and practices—e.g., individual liberties, properties of personhood, the nature of the state, obligations and rights, etc. *Staff.*

## PHIL 206: Contemporary Moral Problems

(1 Unit)
An introduction to a broad range of philosophical subjects and methodologies through an examination and analysis of contemporary moral problems—e.g., abortion, euthanasia, genetic engineering, sexual morality, gender and racial discrimination, corporate crime, pornography and censorship, the death penalty, ecology, world hunger, etc. *Madhok.*

## PHIL 207: Symbolic Logic

(1 Unit)
A study of the formal conceptual tools used by modern deductive logic to express and evaluate arguments. Emphasizes the use of propositional and quantifier logic to clarify and evaluate arguments. *Mittag.*

## PHIL 211: Ancient Philosophy

(1 Unit)
A survey of the beginnings of western philosophical thought focusing on the writings of the Presocratics, Plato, Aristotle and others. *Kirby.*

## PHIL 212: Modern Philosophy

(1 Unit)
Philosophical thought in the seventeenth, eighteenth and nineteenth centuries, focusing on the writings of such philosophers as Descartes, Leibnitz, Locke, Berkeley, Hume, Kant, Hegel, Kierkegaard and Nietzsche. *Kirby.*

## PHIL 214: Twentieth Century Philosophy

(1 Unit)
Major movements in and methods of contemporary philosophical thinking with special attention to the analytic and existential thinkers. Offered in alternate years. *Kirby.*

## PHIL 220: Philosophy and History of Science

(1 Unit)
Considers the following questions: What is science? What is scientific explanation? What are the ontological commitments of a scientist? To what extent does the culture of a scientific community affect results of that community? *Kirby.*

## PHIL 234: Philosophy of Religion

(1 Unit)
Same as RS 234. *Staff.*

## PHIL 287: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## PHIL 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## PHIL 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## PHIL 301: Environmental Ethics

(1 Unit)
Examines theoretical and practical perspectives on ethical issues in relation to the environment. The theoretical issues range from whether we should assign moral value to species other than the human (and if so, on the basis of what criteria) to whether we have moral obligations to preserve the environment for future generations (and if so, what this would imply for the present generations). The practical issues range from creating incentives for restricting population growth without abdicating responsibilities toward the world's hungry, to the issue of what short-and long-term policies and practices need to be adopted to deal effectively with reducing pollution and hazardous waste while working toward a recycling, sustainable global society. *Madhok.*

## PHIL 302: Leadership Ethics

(1 Unit)
Examines the ethical foundations of leadership. Involves an in-depth discussion of foremost leadership theories and their applications to different contexts; critically examines the morally distinct aspects of leadership by looking at the relationships among power, self-interest, and morality; and analyzes leadership from within the ethical frameworks of virtue, duty, and utility along with discussing the ethical challenges of diversity (culture relativism, race, and gender) to traditional leadership ethics. *Madhok.*

## PHIL 303: Business Ethics

(1 Unit)
An examination of selected moral problems posed by corporate conduct—e.g., profit-maximization vs. social responsibility, corporate crime and the criminal justice system, business vs. environmental concerns, preferential hiring

vs. reverse discrimination, employee autonomy vs. corporate loyalty, deception vs. honesty in advertising, corporate vs. government regulation. Clarification and critical examination of different ethical perspectives for resolving these moral dilemmas. *Madhok.*

## PHIL 304: Ethics and Public Policy

(1 Unit)
Emphasizes the ethical foundations of public policy. Rights, obligations, justice, autonomy, the nature of the good life: should these play a role in determining public policy, and if so, how? Focuses on the interaction between ethical values and public policy in areas such as health care, law, government, foreign policy, citizenship, education and media. *Madhok.*

## PHIL 306: Neuroscience and Ethics

(1 Unit)
An introduction to the dialogue that has developed between cognitive neuroscientists and moral philosophers. Cognitive neuroscience brings to the study of ethics an interest in the way the brain processes information and in the kinds of brain states that subserve thought and action—in short, it is answering the question of what kind of information-processing creatures we are. *Madhok.*

## PHIL 308: Biomedical Ethics

(1 Unit)
The application of major ethical theories to some of the moral problems raised by recent developments in medical technology. Does increased medical knowledge (the end) justify experimentation with human subjects (the means)? How much should a patient be told and who decides? Do parents have the right to give birth to a defective infant and thereby apparently pollute the gene pool? To whom is the genetic counselor responsible—fetus, parent, future generations? Is there a right to die? Who should be the ultimate decision-maker—physician, patient, pastor? Is health care a right or a privilege? In answering these dilemmas, are there any moral rules to follow or does each person decide what is best in the situation? *Madhok.*

## PHIL 309: International Ethics and Global Development

(1 Unit)
Explores the ethics of development in an international context. What should development be? Who should play a role in bringing about development? Examines multiple answers to these questions via an understanding of global development ethical theories and approaches such as the basic human needs approach, the human rights approach, the theory of development as freedom, the capabilities approach, theories of justice, as well as utilitarianism and deontological approaches. Applies these development ethics frameworks to important international issues such as poverty, gender inequality, violence and insecurity, over-consumption and globalization. *Madhok.*

## PHIL 310: Metaphysics

(1 Unit)
Explores what kinds of things exist. Do abstract entities exist? Is there such a thing as free agency in a world that is deterministic (or, for that matter, in a world that is not deterministic)? Is time something that is mind-dependent or mind-independent? Are we committed to the existence of electrons? Is causation anything above and beyond regularity? *Kirby.*

## PHIL 311: Philosophy of Biology

(1 Unit)
In this course we will engage in philosophy that is oriented toward issues relating to the discipline of biology. We will interpret, analyze, and assess texts treating topics such as evolutionary ethics, the philosophy of race, moral realism in light of evolution, the nature of the gene, genetic determinism and moral responsibility, evolutionary altruism, the nature of species, and the nature of biodiversity. *Kirby*

## PHIL 315: Knowledge, Truth and Reason

(1 Unit)
Prerequisite: One prior course in philosophy.
A critical examination of recent work in the theory of knowledge, i.e., of classic contemporary papers on skepticism, knowledge and the justification of belief. *Mittag.*

## PHIL 318: Philosophy of Mind

(1 Unit)
An introduction to the philosophy of mind. Explores the relation of the mind to the physical world and evaluates prominent competing theories about the nature of the mind, including the identity theory, dualism, behaviorism, functionalism and eliminative materialism. Also covers artificial intelligence, phenomenal consciousness, the adequacy of folk psychological explanation and theories of mental content. *Mittag.*

## PHIL 325: Philosophy of Language

(1 Unit)
Words and sentences of a language have meanings, thereby allowing us to use sentences to communicate our thoughts, some of which are true. But how do words and sentences get their referents and meanings? What are meanings? This course focuses on central developments in the philosophy of language throughout the twentieth century. Topics include theories of meaning and reference, speech acts, pragmatics, and conversational implicature. *Mittag.*

## PHIL 335: Philosophical Issues in the Law

(1 Unit)
Designed both for students interested in philosophy and for those interested in political science, history, economics, or sociology. Provides an explanation of legal concepts and institutions from the philosophical perspective. Develops in the student: (1) an understanding of some of the major philosophical issues in the law and (2) the ability to reflect critically upon them. *Madhok.*

## PHIL 380: Aristotle: A Western Foundation

(1 Unit)
Considers how Aristotle's philosophy continues to exercise influence today, especially concerning controversies over the nature of existence, identity, the soul and the way one should live. Explores and evaluates the arguments of a philosopher who was the finest pupil in Plato's Academy, the personal instructor of Alexander the Great, and the founder of the Lyceum. *Kirby.*

## PHIL 381: Readings in Philosophy

(1 Unit)
Prerequisite: Permission of instructor.
Recommended for advanced students. Careful and critical study of one or more of the outstanding works in philosophy. *Staff.*

## PHIL 382: Readings in Philosophy

(1 Unit)
Prerequisite: Permission of instructor.
Recommended for advanced students. Careful and critical study of one or more of the outstanding works in philosophy. *Staff.*

## PHIL 387: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## PHIL 388: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## PHIL 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## PHIL 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

## PHIL 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

## PHIL 401: Seminar

(1/2 Unit)
Prerequisite: Permission of instructor.
Recommended for advanced students. Topics of special interest including "Justice," "Metaphysics," "Moral Realism," "Russell." *Staff.*

## PHIL 402: Seminar

(1 Unit)
Prerequisite: Permission of instructor.
Recommended for advanced students. Topics of special interest including "Justice," "Metaphysics," "Moral Realism," "Russell." *Staff.*

## PHIL 411: Directed Study

(1/2 Unit)
*Staff.*

### PHIL 412: Directed Study

(1 Unit)
*Staff.*

## Physics

### PHYS 101: Basic Concepts of Physics

(1 Unit)
Prerequisite: High school algebra.
The basic ideas of physics in a historical and philosophical framework to give the student insight and appreciation of physics of this century and how physics relates to our contemporary society. Not intended for science majors. Lecture and laboratory. Offered in alternate years. *Staff*

### PHYS 102: The Physics of Urban and Environmental Problems

(1 Unit)
Prerequisite: High school algebra.
The physics of modern urban and environmental problems with respect to their causes, effects and possible cures. Topics include transportation, energy generation and transmission, pollution and resources. Not intended for science majors. Offered in alternate years. *Zellner*.

### PHYS 105: Introductory Astronomy

(1 Unit)
Prerequisite: High school algebra.
A study of the night sky, planets, stars, galaxies, cosmology, and our place in the universe, along with discussion of observational techniques and space missions. Not intended for science and mathematics majors or minors or students who have taken physics or calculus in high school. Lecture and laboratory, with additional multiple observing sessions required. *Zellner*.

### PHYS 115: General Physics

(1 Unit)
Prerequisite: High school algebra. First-year students need permission of instructor.
First semester of an algebra-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Includes analytical, historical and philosophical aspects. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

### PHYS 116: General Physics

(1 Unit)
Prerequisite: PHYS 115.
Second semester of an algebra-based survey of general physics. Topics include electricity and magnetism, light and optics, and atomic and nuclear physics. Includes analytical, historical and philosophical aspects. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff*

## PHYS 167: Analytical Physics I

(1 Unit)
Corequisite: MATH 141, or permission of instructor.
First semester of a calculus-based survey of general physics. Topics include kinematics, dynamics, fluid mechanics, thermodynamics, wave motion, and sound. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

## PHYS 168: Analytical Physics II

(1 Unit)
Prerequisite: PHYS 167. Corequisite: MATH 143 or permission of instructor.
Second semester of a calculus-based survey of general physics. Topics include electricity and magnetism, light and optics, and select topics in modern physics. Studio format. Course is equivalent to a traditional lecture and laboratory course. *Staff.*

## PHYS 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## PHYS 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## PHYS 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## PHYS 191: Colloquium in Physics and Astronomy I

(.25 Unit)
Discussion of selected topics in physics and astronomy as determined by student and staff interest. Led by departmental faculty, visiting speakers and students. Students are required to read selected scientific papers, attend presentations and actively participate in discussions. Offered on a credit/no credit basis. *Staff.*

## PHYS 205: Planetary Astronomy

(1 Unit)
Prerequisite: High school algebra or permission of instructor.
Covers our solar system's origin and evolution, including Newton's and Kepler's Laws, planetary motion, planet characteristics, and detection of extrasolar planets. Investigates planetary and other images and data returned by solar system spacecraft. Considers recent developments in biochemistry and whether or not life could exist on other worlds. *Zellner.*

## PHYS 206: Astrophysics I: Stars, Galaxies and Cosmology

(1 Unit)
Prerequisites: MATH 141 and/or a previous physics course, or permission of instructor.
Provides an understanding of stars and how they work, and examines our galaxy. Covers topics related to cosmology, including our expanding universe. Intended for mathematics and science majors and minors and for students pursuing teacher certification in science. *Zellner*.

## PHYS 243: Introduction to Mathematical Methods in Physics I

(.5 Unit)
Prerequisite: PHYS 168, or permission of instructor.
An introduction to the mathematical methods in Physics. Topics include statistical interpretation of data and distribution functions, functions of a complex variable, and Fourier analysis. *Staff.*

## PHYS 244: Introduction to Mathematical Methods in Physics II

(.5 Unit)
Prerequisites: PHYS 168 and PHYS 243, or permission of instructor.
A continuation of PHYS 243. Topics include Coordinate transformations and curvilinear coordinates, partial differential equations, matrices and linear algebra. *Staff*

## PHYS 245: Electronics

(1 Unit)
Prerequisite: PHYS 168, or PHYS 116 with MATH 143, or permission of instructor.
The use of linear and integrated circuits, discrete devices, amplifiers, power supplies, oscillators and digital logic in experimental design and data acquisition. Applications of measurement instrumentation. Lecture and laboratory. *Staff.*

## PHYS 250: Introductory Modern Physics

(1 Unit)
Prerequisites: MATH 245 and PHYS 243, or permission of instructor. Corequisites: PHYS 244 and MATH 247, or permission of instructor (may also be taken as prerequisites).
A survey of modern physics. Topics include special relativity, the quantum theory of light and quantum mechanics of matter with applications in atomic, nuclear and elementary particle physics. *Staff.*

## PHYS 287: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## PHYS 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## PHYS 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## PHYS 291: Colloquium in Physics and Astronomy II

(1/4 Unit)
Prerequisite: PHYS 191, junior or senior standing.
Discussion of selected topics in physics and astronomy as determined by student and staff interest. Led by departmental faculty, visiting speakers and students. Students are required to read selected scientific papers, attend presentations, actively participate in discussions, and give a presentation on a scientific paper of their choice. Offered on a credit/no credit basis. *Staff.*

## PHYS 308: Optics

(1 Unit)
Prerequisite: PHYS 250, or permission of instructor.
An introduction to geometrical and physical optics which includes paraxial theory, polarization, interference and diffraction phenomena, and optical instruments. Topics in contemporary optics, including lasers, holography and Fourier optics will also be discussed. Lecture and laboratory. Offered in alternate years. *Staff.*

## PHYS 322: Solid State and Nuclear Physics

(1 Unit)
Prerequisite: PHYS 250.
An introduction to the modern quantum mechanical description of solids and the atomic nucleus. Lecture. Offered in alternate years. *Moreau.*

## PHYS 325: Theoretical Mechanics

(1 Unit)
Prerequisites: PHYS 244, MATH 247.
Review of elementary mechanics, one-dimensional motion, harmonic oscillator, motion in two and three dimensions, central force motion and orbital mechanics, many-particle systems, rotational motion, gravitation, moving coordinate systems and Lagrangian mechanics. *Zellner.*

## PHYS 336: Electricity and Magnetism

(1 Unit)
Prerequisites: PHYS 244, MATH 247.
A thorough discussion of Maxwell's electromagnetic field equations in differential form. Major topics are electrostatics, magnetostatics, electromagnetic induction and electromagnetic waves. *Moreau.*

## PHYS 350: Advanced Laboratory

(1 Unit)
Prerequisites: PHYS 245 and PHYS 250, or permission of instructor.
A junior-level laboratory designed to give students experience in independent research in experimental physics. Experiments include topics in optics, electricity and magnetism, atomic physics, and quantum physics. Strong emphasis is given to statistical analysis of data, error analysis, interpretation of measurements, techniques of measurement, and experimental design. Computer control of apparatus and computational analysis is also emphasized. *Staff.*

## PHYS 380: Mathematical Physics

(1 Unit)
Prerequisites: MATH 247, or permission of instructor.
Mathematical methods in physics including vector calculus, transform calculus, tensor analysis and special functions (viz. Fourier series, Gamma functions, Hermite polynomials, Bessel functions, spherical harmonics and Laguerre polynomials). Same as MATH 380. *Staff.*

## PHYS 384: Thermodynamics and Statistical Mechanics

(1 Unit)
Prerequisites: PHYS 250, MATH 247.
Classical thermodynamics, including kinetic theory and an introduction to statistical mechanics. *Moreau.*

## PHYS 387: Quantum Mechanics

(1 Unit)
Prerequisite: PHYS 250, or permission of instructor.
Non-relativistic quantum interpretation of matter and energy, employing both the wave mechanics of Schroedinger and the matrix mechanics of Heisenberg. *Staff.*

## PHYS 388: Selected Topics

(1/4 Unit), (1/2 Unit), 1)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## PHYS 389: Selected Topics

(1/4 Unit), (1/2 Unit), 1)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## PHYS 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

## PHYS 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

## PHYS 401: Seminar

(1/2 Unit)
*Staff.*

## PHYS 402: Seminar

(1 Unit)
*Staff.*

### PHYS 411: Directed Study

(1/2 Unit)
*Staff.*

### PHYS 412: Directed Study

(1 Unit)
*Staff.*

## Political Science: American Politics and Policy

### PLSC 101: Politics of American Democracy

(1 Unit)
An overview of the dynamics and structure of the American political system: the Constitution, civil liberties, Congress, the Presidency, bureaucracy, interest groups, political parties, and voting behavior. Contrasts the principles of democratic action with a behind-the-scenes examination of how public policy is actually made. *Dabney, Grossman, Rose.*

### PLSC 214: Congress and the Presidency

(1 Unit)
An examination of the changing roles and responsibilities of Congress and the presidency with a focus on the changing political environment and the potential for leadership. *Grossman.*

### PLSC 225: American Citizenship in Theory and Practice

(1 Unit)
Focuses on the ways in which the concept of American citizenship has changed over time in response to various historical events such as the founding of the American republic, the abolition of slavery, the expansion of suffrage rights, the waves of immigration from Europe and Asia, and other circumstances. *Grossman, Rose.*

### PLSC 229: Film Images of World War II

(1 Unit)
The history of the Second World War and world films made about the war from 1939 to the present. (Film fee.) Offered in alternate years. Same as HIST 229. *Cocks, Grossman.*

### PLSC 302: Public Policy, Interest Groups, and the American Welfare State

(1 Unit)
Prerequisites: Sophomore standing, PLSC 100 and PLSC 101.
This seminar analyzes the United States and the development of a robust middle-class welfare state: i.e., the "hidden" welfare state. While US centric, the seminar does not ignore a comparative analysis of other types of welfare states. The seminar analyzes key scholarship on contemporary state theory and American political development (APD) and

engages broad questions about public policy, state formation, bureaucratic development, and the rise and fall of the New Deal/Administrative State (1932-1980). Emphasis will be on the fundamental role that interest group liberalism (IGL) has on the public policy arenas of: race relations, civil rights & civil liberties, healthcare, education, urban affairs, rural politics, and the way that IGL has configured law, legislation, and liberal democratic structures in the USA are the primary areas for analysis. The seminar will provide an opportunity for students that wish to in a purposely cross-disciplinary approach: an approach that draws heavily on scholarship in politics, history, and political sociology. *Staff*

### PLSC 310: State and Local Government

(1 Unit)
Prerequisites: PLSC 101 or permission of instructor.
This course will cover state and local government and politics with an emphasis on Michigan's state government and local governments. Topics will include the challenges facing government at both levels, including education, housing, economic development, revitalizing urban areas, and the changing relationship with Washington, D.C. Sections of the course will cover specific themes including campaigns and the Michigan political landscape; the Michigan economy; political leadership; and the legislative processes at both the state and local levels. *McLean*

### PLSC 312: American Political Development

(1 Unit)
Prerequisites: PLSC 100, PLSC 101.
Considers rotating topics: war, race, and organizational and institutional changes in historical context. Seminar themes include: the periodization of American history, national state formation, the political economy of industrialization and urbanization, and the social dynamics of continuity and change in the American political system. *Grossman.*

### PLSC 315: Presidential Campaigns and Elections

(1 Unit)
Prerequisites: PLSC 100, PLSC 101 .
The continuing evolution of both the presidential nominating process and the fall general election campaign. A look at the role played by political parties, candidate-centered organizations, money, issues, images and the mass media in the presidential selection process. Offered in those years when the presidential election campaign is at its peak! *Dabney, Staff.*

### PLSC 317: Political Parties in the United States

(1 Unit)
Prerequisites: PLSC 100, PLSC 101.
Examines the evolution of the party system in the U.S. and roles political parties play in contemporary American politics. Looks at party realignments, third party movements and advancements, party infighting and bipartisan cooperation. Addresses the question of party decline and the rise of alternative institutions of interest articulation. *Dabney.*

## Political Science: International Relations and Comparative Politics

### PLSC 102: Introduction to Comparative Politics

(1 Unit)
Examines the political institutions and processes of countries around the world. Emphasizes how to make meaningful comparisons between systems in different countries. Covers conditions for and functions of democracy, with an emphasis on how different kinds of democracies work. Provides a framework for comparison and considers the United States in comparative perspective. Topics include the vibrancy of democracy, the centrality of political and electoral institutions, the possibility of revolution, and the power of ethnicity. *Dabney.*

## PLSC 103: Introduction to International Politics

(1 Unit)
Examines and evaluates competing theoretical approaches ("paradigms") which seek to explain inter-state war, international institutions and the global economy. Explores scholarly debates about the implications of international anarchy and national sovereignty. Focuses on the causes of violent conflict, the emergence of human rights norms and international courts, the dilemmas of humanitarian intervention, and the implications of global inequality. Part I examines competing theoretical perspectives in the discipline; Part II,approaches to studying war, violence and conflict; Part III, international institutions; Part IV, issues related to the global economy and international development. *Grossman, Walling.*

## PLSC 207: Transitional Justice

(1 Unit)
How does a government build a secure, democratic society built on the rule of law and principles of human rights in the aftermath of mass atrocity? How do people live together peacefully in the aftermath of mass atrocity? Explores the set of practices, mechanisms and concerns that arise when a new government attempts to come to terms with a legacy of past human rights violations following a period of conflict, civil strife or government repression, e.g., amnesties, reparations, truth commissions, and criminal prosecutions in order to ensure accountability, serve justice, discover truth and achieve societal reconciliation. *Walling.*

## PLSC 235: American Foreign Policy

(1 Unit)
Exploration of the history of American foreign policy, covering leading theories that explain its shifting style, goals, and outcomes. *Grossman.*

## PLSC 237: Controversies in Global Politics

(1 Unit)
How do we achieve justice beyond borders in an increasingly complex and interdependent world? By examining different traditions of political, ethical, and legal thought, students acquire the tools necessary to make reasoned judgments about urgent political problems in international politics. These problems include but are not limited to: global poverty, human rights, immigration, global climate change, nuclear proliferation, terrorism, and sea-level rise. *Walling.*

## PLSC 256: Human Rights

(1 Unit)
Introduces the key concepts and theoretical tools for understanding human rights and human rights policy in the context of the modern world. Examines human rights in a global comparative context with emphases on all the major world regions. Draws on the central theories and concepts of comparative politics and international relations to explain how and why governments protect (or fail to) human rights and to examine the intersection among citizens, governments, and non-governmental organizations that work to investigate and protect against human rights abuses. *Walling.*

## PLSC 301: International Organizations

(1 Unit)
Prerequisites: PLSC 100 ; PLSC 102  or PLSC 103

This course examines why states create international organizations and considers whether or not they are significant and effective actors in international politics.  Students will expolore the processes of global governance across a wide range of issues and become acquainted with the institutional and legal structures of inter-state cooperation in multiple regions of the world.  This course will emphasize security cooperation wnd global governmental organizations liek the United Nations, NATO and the International Criminal Court as well as non-governmental organizations like the International Committee for the Red Cross and Amnesty International.

Lecture

## PLSC 306: Democratization and Democratic Breakdown

(1 Unit)
This class examines democratic transitions and democratic erosions worldwide. When examining the issue of democratic transitions, we will try to understand why, how and when do they occur, while also paying special attention to political, cultural, social and economic conditions that foster good democratic governance. Students will learn to identify the key attributes of democracy in both theory and practice, and gain an understanding of how political scientists measure democracy. This course will also examine the conditions under which once consolidated democracies, erode. Our analytical focus will therefore turn to critically analyzing developments in economically well-developed countries, including the United States, that undermine democratic institutional structures. Both processes – democratization and democratic erosion – will include case studies from various regions in order to better understand their causes and consequences. *Staff*

## PLSC 336: International Relations

(1 Unit)
Prerequisites: PLSC 100 and one of either PLSC 102 or PLSC 103.
A study of the behavior of nations, including topics such as: national power, balance of power, deterrence, diplomacy, collective security, international law, international organization and disarmament. *Grossman, Walling.*

## PLSC 338: International Political Economy

(1 Unit)
Prerequisites: PLSC 100 and one of either PLSC 102 or PLSC 103.
An introduction to the study of political economy, i.e., the reciprocal relationship between political and economic activities and institutions, through an examination of the pursuit of wealth and power in the international system. Considers the strengths and weaknesses of different theoretical, analytical and ideological approaches to understanding the international political economy in both historical and contemporary settings. Specific issues include trade, international finance, foreign investment, economic development, structural adjustments and globalization. *Grossman.*

## PLSC 352: The Comparative Politics of Developing Nations

(1 Unit)
Prerequisites: PLSC 100 and one of either PLSC 102 or PLSC 103.
A survey of the principal arguments about global inequality and the developmental paths of countries outside the industrialized West. Includes an examination of the roles major powers and international and non-governmental organizations have played in the political and economic histories of developing countries. *Dabney.*

### PLSC 372: Gender, Sex and International Politics

(1 Unit)
Prerequisites: PLSC 100 and one of either PLSC 102 or PLSC 103.
Explores how gendered norms and assumptions shape international politics. Introduces feminist approaches to international politics in order to answer questions like "where are the women?" and "how do women experience international politics differently than men because of their biological sex?" Also evaluates the 'gendered hierarchies' of international relations—gendered expectations of individuals, state and other actors. *Walling.*

### PLSC 404: Causes of War

(1 Unit)
Prerequisites: PLSC 100 and one of either PLSC 102 or PLSC 103.
Student must be a political science major or minor with junior or senior standing, or permission of instructor. Explores the central issues regarding the use of military force in international politics. Why do states turn to military force and for what purposes? What are the causes of war? What renders the threat to use force credible? Can intervention into intra-state wars stall bloodshed and bring stability? How can states cope with new challenges posed by asymmetrical warfare and the threats of would-be terrorists? What are the rules and laws of war? How do states diminish the threat of war? Part I examines the causes of inter-state war and the strategies states employ to diminish the threat of war and handle its effects; Part II, the growing trend of intra-state conflict; Part III, the global governance of war, specifically the institutions, rules and norms associated with war-fighting and conflict prevention; Part IV, other forms of political violence including asymmetrical warfare, rebel insurgencies and terrorism. *Grossman, Walling.*

### PLSC 405: National Security Policy

(1 Unit)
Prerequisites: PLSC 100 and one of either PLSC 102 or PLSC 103.
Student must be a political science major or minor with junior or senior standing, or permission of instructor. Explores the new security challenges facing the United States and other nations in the post-Cold War period. Introduces security studies, looking at the issue of nuclear weapons and its integration into strategic policy planning. Considers alternative ways to comprehend the concept of security and security studies in light of economic globalization, asymmetrical warfare, terrorism, democratization, the changing character of sovereignty, and the problem of weapons (conventional and non-conventional) proliferation. *Grossman, Walling.*

## Political Science: Law, Jurisprudence and Political Thought

### PLSC 105: Introduction to Political Thought

(1 Unit)
Offers an introduction to political theory. Explores major debates within the field, both in contemporary and canonical work. Proceeds both thematically, examining such themes as liberty, justice, democracy, political resistance, and power, and historically, situating theorists' writings within the historical context in which they were written and read. Also considers the relationship between political theory, political practice and the other subfields of political science. *Rose.*

### PLSC 224: Constitutional Law and Politics

(1 Unit)
Explores the role of the U.S. Supreme Court in political struggles over the distribution and uses of power in the American constitutional system. Covers issues including the division of powers between state and national governments, and the branches of the federal government; economic powers of private actors and governmental

regulators; the authority of governments to enforce or transform racial and gender hierarchies; and the powers of individuals to make basic choices, such as a woman's power to have an abortion. Emphasizes how the tasks of justifying the Supreme Court's own power, and constitutionalism more broadly understood, contribute to logically debatable, but politically powerful constitutional arguments. Also examines the politics of constitutional interpretation. Readings include Supreme Court decisions and background materials on their theoretical, historical and political context. *Rose.*

## PLSC 322: Crime, Politics and Punishment

(1 Unit)
Prerequisites: PLSC 100, PLSC 105.
Whom a society punishes and how it punishes are key political questions as well as indicators of the character of the people in whose name it acts. This course examines connections between punishment and politics with particular reference to the contemporary American situation. *Rose.*

## PLSC 324: Civil Rights and Civil Liberties

(1 Unit)
Prerequisites: PLSC 100, PLSC 105.
Examines the American Constitution and some of the rights protected by it. Topics to be covered include: the role of the judiciary in protecting individual rights in a democratic context, methods of constitutional interpretation, incorporation, the right to bear arms, economic liberty, abortion and privacy rights, freedom of religion, freedom of speech, freedom of association, freedom of the press, the death penalty, and equal protection before the law. *Rose.*

## PLSC 351: Modern Political Thought

(1 Unit)
Prerequisites: PLSC 100, PLSC 105.
Critical examination of the work of modern writers on enduring themes of political life. Covers such thinkers as Machiavelli, Hobbes, Locke, Rousseau, Hegel and Marx, through careful reading of the texts. Explores topics such as equality, democracy, women's rights and contending definitions of freedom. *Rose.*

## PLSC 357: International Law and Politics

(1 Unit)
Prerequisites: PLSC 100, PLSC 105.
Examines international law using a broad range of analytical tools to enable students to think critically about the origins and impact of international law. How do we explain where particular laws and norms come from? How do they affect the shape of global politics and the outcomes of particular events? How often do states obey international law, and why? Also examines substantive areas of international law such as the law of armed conflict, international humanitarian law, human rights, international criminal law and environmental law. *Walling.*

## PLSC 367: American Political Thought

(1 Unit)
Prerequisites: PLSC 100, PLSC 105.
Explores the history of American political ideas, and how those ideas continue to inform contemporary political thinking. Focuses on the nineteenth and twentieth centuries, with principal attention given to the Transcendental Movement and the emergence and development of pragmatism. Examines this dominant thread of American thought against the backdrop of liberalism and within the context of four related themes: individualism, equality, community and democracy. *Rose.*

### PLSC 406: Privacy and the Surveillance Society

(1 Unit)
Prerequisites: PLSC 100 and PLSC 105.
Student must be a political science major or minor with junior or senior standing, or permission of instructor. Surveillance has become a topic of central importance for citizens and governments alike. As new technologies are developed and deployed, both by government and private entities, once conventional understandings of privacy and personhood have been permanently altered. How should relations between citizen and state, citizen and corporate entities, and among citizens themselves be understood? In what ways might human rights principles be threatened by global flows and exchanges of data? How are concepts like personhood, identity, trust and privacy being transformed and shaped through surveillance practices? How might such developments be challenged and struggled over? What implications does national security policy have for individually situated notions of human security? Topics considered will include: whether or not the state has become more authoritarian via its data collection practices and activities; what issues are raised by surveillance cultures embedding themselves into the everyday fabric of social life and social organization; and, whether there are constitutional tools available to citizens to challenge surveillance protocols and processes. *Rose.*

## Political Science: Political Research

### PLSC 100: Introduction to Political Inquiry

(1 Unit)
Examines the history of the discipline, and surveys principal approaches to describing and explaining political phenomena, including qualitative and quantitative analysis and moving from the behavioralism of the late 1940s, to critical theories, interpretive approaches, and rational choice models of later generations, and on to postmodern critiques challenging the idea that political science can be a science. *Dabney, Grossman, Rose, Walling.*

### PLSC 309: Religion and Research Methods in Comparative Politics

(1 unit)
Prerequisites:  PLSC 100 and (PLSC 102 or PLSC 103).
This course intends to expose students to two overlapping concerns: 1) what is the influence of religion on politics, and 2) what kind of research methods do political scientists use to study this relationship? This class is also meant to sharpen students' analytical skills by challenging them to think systematically about social science methods and how they relate to religion and politics. Since social scientists use different types of analytical models (e.g., game theory, statistical modeling) to simulate how religion affects politics, students in this class will pay special attention to the following concerns: 1) how was empirical evidence obtained and the extent to which the data is both internally and externally valid; 2) does the resulting model allow us to make a prediction about future outcomes, and how accurate these predictions are; 3) what are the limits of modeling in social sciences; and finally 4) in what ways modeling can enhance or inhibit the development of knowledge in social and applied sciences. Although a significant part of the class will focus on the role of religion in America, the in-depth exploration of the subject will also expose students to scholarship examining how religion matters in different cultural and political settings. *Tatarczyk*

## Political Science: Special Studies

### PLSC 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### PLSC 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### PLSC 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### PLSC 287: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### PLSC 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### PLSC 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### PLSC 387: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### PLSC 388: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### PLSC 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### PLSC 391: Internship

(1/2 Unit)
Prerequisite: Permission of department.
Offered on a credit/no credit basis. *Staff.*

### PLSC 392: Internship

(1 Unit)
Prerequisite: Permission of department.
Offered on a credit/no credit basis. *Staff.*

### PLSC 401: Seminar

(1/2 Unit)
Individual research within context of small group discussion and analysis of a common topic of politics. *Staff.*

### PLSC 402: Seminar

(1 Unit)
Individual research within context of small group discussion and analysis of a common topic of politics. *Staff.*

### PLSC 411: Directed Study

(1/2 Unit)
Individual research on a senior thesis under tutorial direction of the faculty. (Students must have a grade point average of 3.0 to take a Directed Study in political science.) *Staff.*

### PLSC 412: Directed Study

(1 Unit)
Individual research on a senior thesis under tutorial direction of the faculty. (Students must have a grade point average of 3.0 to take a Directed Study in political science.) *Staff.*

## Psychological Science

### PSYC 101: Introduction to Psychology

(1 Unit)
An introduction to psychology's major areas of study, theoretical approaches, empirical findings, and research methodologies. Provides students with a broad overview of the field of psychology and examines the nature of psychology as a discipline. Addresses Psychology's major sub-disciplines, which range from the borders of biology to the borders of computer science to the borders of sociology. Introduction to Psychology is a prerequisite for all other psychology courses. *Staff.*

### PSYC 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### PSYC 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### PSYC 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## PSYC 204: Research Methods and Statistics I

(1 Unit)
Prerequisites: PSYC 101 with a grade of 2.0 or higher and a 200-level lecture-based course, or permission of instructor.
An introduction to the theory and practice of research methods in psychology with an emphasis on descriptive designs. Focuses on naturalistic, archival, and survey methodology with discussion of descriptive statistics, probability, Chi-square, z-scores, correlation, and multiple regression. Lecture and laboratory. Course normally taken during second year. *Christopher, Elischberger, Francis, Hill, Jechura, Wieth, Staff.*

## PSYC 210: Educational Psychology

(1 Unit)
Prerequisite: PSYC 101 or Education 101.
Educational psychologists develop and apply theories of teaching, learning, and human development to determine the most effective ways for educators to teach students. Ideas about human learning and development impact many teaching activities, including lesson planning, structuring exercises, and diagnosing learning difficulties. Students will discuss how educational psychologists have studied and contributed to educational approaches worldwide including instructional design, educational technology, curriculum development for different content areas, classroom organizational learning, special education and classroom management. This course advances students' understanding of what constitutes typical learning and development, and the mechanisms that influence learning in educational settings across the globe. *Francis.*

## PSYC 230: Health Psychology

(1 Unit)
Prerequisites: PSYC 101 or permission of instructor.
The role of behavior in the prevention of disease and in the enhancement of health. Looks at behavior in relation to stress, pain, cardiovascular disease, cancer, alcohol abuse, weight control, psychoneuroimmunology. Contrasts biomedical and biopsychosocial approaches to health and disease. *Jechura.*

## PSYC 236: Social Psychology

(1 Unit)
Prerequisite: PSYC 101.
The scientific study of the ways people think, feel and behave in social situations. Topics include self-perception and self-presentation, person perception, stereo-typing and prejudice, interpersonal attraction and close relationships, altruism, aggression, attitudes and persuasion, conformity, and group processes. Also examines theory and research in several applied areas of social psychology, including law and health. *Hill, Staff.*

## PSYC 241: Neuroscience I: Brain Structure and Function

(1 Unit)
Prerequisite: PSYC 101, or BIOL 195, or permission of instructor.
An introduction to brain structure and function. Emphasis on the way the nervous system is organized to process information, construct representations of the world and generate adaptive behavior. Lecture, discussion, dissection. Same as NEUR 241. *Jechura, Keyes, Schmitter, Wieth, Wilson.*

## PSYC 243: Sensation & Perception

(1 Unit)
Prerequisite: PSYC 101.
Operation of sensory systems and major principles of perception. Addresses the classical question, "Why do things look as they do?" Not offered every year. *Wieth.*

## PSYC 244: Psychology of Emotion

(1 Unit)
Prerequisites: PSYC 101
This course explores the psychological phenomenon of emotion as well as its biological underpinnings. We will attempt to answer key questions about where emotions come from (both evolutionarily and neurologically), why we have them, and how they affect our lives. We will explore the cultural, biological, developmental, social, and pathological aspects of emotional processes. Through regular emotion-tracking and reflection exercises, targeted happiness interventions, and the generation of an evidence-based self-improvement plan over the course of the semester, we will aim to apply insights from these topics to our own lives. *Selleck*

## PSYC 245: Psychology of Learning

(1 Unit)
Prerequisite: PSYC 101.
A survey of major concepts and issues in conditioning, learning and memory processes. Emphasizes research dealing with the ways learning and memory interact with other variables such as development and species-typical behavior. Lecture and laboratory. Not offered every year. *Wilson.*

## PSYC 247: Drugs, Brain, and Behavior

(1 Unit)
Prerequisite: PSYC 101.
This course is intended as an introduction to the study of drug use, abuse, and addiction, with a focus on recreationally-used drugs. Basic principles of pharmacology and neural transmission will be examined to better understand how drugs influence our brain and behavior. The impact of drug use on society, as well as intervention approaches, will be considered throughout the course. *Wieth, Wilson*

## PSYC 251: Child and Adolescent Development

(1 Unit)
Prerequisite: PSYC 101.
Focuses on physical, cognitive, social and emotional development with emphasis on the periods of infancy, childhood and adolescence. Reviews methods for studying the developing person and major theoretical approaches. *Elischberger, Francis, Keyes, Staff.*

## PSYC 254: Lifespan Development

(1 Unit)
Prerequisite: PSYC 101
Focuses on physical, cognitive, social and emotional development across the lifespan. Adopts an integrative and interdisciplinary approach to understanding the human experience from birth to death. *Elischberger, Keyes, Staff.*

## PSYC 260: Psychology of Language

(1 Unit)
Prerequisite: PSYC 101.
Examines the relationship between the uniquely human cognitive capacity of language and other cognitive processes. Acquisition, comprehension, production, and utilization are studied with particular reference to structure and meaning. Not offered every year. *Staff.*

## PSYC 265: Psychology of Mental Illness

(1 Unit)
Prerequisite: PSYC 101.
This course offers an introduction to the historical origins, perspectives, theories, methods, and empirical findings of psychopathology and clinical psychology. Throughout the semester, students will gain greater understanding of the identification and treatment of psychological disorders. Students will be encouraged to critically examine the construct of mental health and to deepen their empathy for those experiencing mental illness through lecture, case study review, class assignments, and discussion. Throughout the course, students will be exposed to the complexities of human behavior and psychological difficulties, as well as the cultural, economic, and ethical issues that arise in diagnosing and treating mental illness. *Keyes, Staff.*

## PSYC 267: Psychology of Personality

(1 Unit)
Prerequisite: PSYC 101.
Examines the major historical theories of personality and their influence on modern, empirically-derived theories of personality. Attention is given to each personality theory's relevance to historical and current events, as well as to the students' own personal and professional development. *Christopher.*

## PSYC 287: Selected Topics

(1/4 Unit)
Prerequisite: PSYC 101.
An examination of subjects or areas not included in other courses. *Staff.*

## PSYC 288: Selected Topics

(1/2 Unit)
Prerequisite: PSYC 101.
An examination of subjects or areas not included in other courses. *Staff.*

## PSYC 289: Selected Topics

(1 Unit)
Prerequisite: PSYC 101.
An examination of subjects or areas not included in other courses. *Staff.*

## PSYC 304: Psychological Assessment

(1 Unit)
Prerequisite: PSYC 204.
The principles of psychological assessment and the general process of clinical diagnosis. Deals with the construction, evaluation, administration and interpretation of widely-used measuring instruments. Offered in alternate years. *Staff.*

## PSYC 306: Research Methods and Statistics II

(1 Unit)
Prerequisite: PSYC 204 with a grade of 2.0 or higher, or permission of instructor.
Further exploration of the theory and practice of research methods in psychology with an emphasis on experimental designs. Focuses on both simple and complex designs with discussion of z-test, t-test, ANOVA (one-way, repeated measures and factorial), and MANOVA. Lecture and laboratory. Course normally taken during second year. *Christopher, Elischberger, Hill, Jechura, Wieth, Staff.*

## PSYC 336: Research in Social Psychology

(1 Unit)
Prerequisites: PSYC 306 with a grade of 2.0 or higher, or permission of instructor.
Focuses on either social cognitive processes or interpersonal relations. Guides the upper-division student through an intensive review of social psychological theory in either social cognition or interpersonal relations. Emphasizes how to assess and employ methodologies that affect explanations, interpretations, and applications of human social cognition and behavior. Laboratory work stresses the inextricable link between theory, methodology, and statistical analyses. Projects relating to one of these two areas closely parallel the process of professional research in social psychology. *Christopher, Hill, Staff.*

## PSYC 346: Industrial and Organizational Psychology

(1 Unit)
Prerequisites: PSYC 101 or E&M 101 and PSYC 204 or E&M 200, or permission of instructor.
Focuses on personnel selection, evaluation and employee training and development. Emphasizes criterion development, motivation, job satisfaction, leadership and conflict resolution in industrial and organizational settings. *Christopher, Staff.*

## PSYC 348: Research in Behavioral Neuroscience

(1 Unit)
Prerequisites: PSYC 306 with a grade of 2.0 or higher and PSYC 241/NEUR 241, or permission of instructor.
Examines the methodology of behavioral neuroscience research. Focuses on a review of the major means by which brain/behavior relations can be determined (i.e., lesion, stimulation, and recording studies) as well as an examination of much that has been learned using these procedures. Laboratory work covers at least two of these procedures in detail: human electrophysiology and a lesion, stimulation, or drug experiment in animals. *Jechura, Wilson.*

## PSYC 378: Research in Cognitive Psychology

(1 Unit)
Prerequisites: PSYC 306 with a grade of 2.0 or higher or permission of instructor.
A review of recent studies of attention, memory, concept formation, problem solving and related areas. Focuses on the ability of humans to select, code, store, organize and retrieve information. Lecture and laboratory. *Wieth.*

## PSYC 380: Introduction to Counseling

(1 Unit)
Prerequisites: PSYC 101, PSYC 204, PSYC 265, or permission of instructor.
A study of the major theories and current approaches to counseling and psychotherapy. Emphasizes important communication and introspection skills necessary in providing a helping relationship to another person. Opportunity is

provided through experiential activities and personal reflection for students to learn and practice some of these basic skills in preparation for a future in counseling or related disciplines. *Staff.*

## PSYC 387: Selected Topics

(1/4 Unit)
Prerequisite: PSYC 101 or permission of instructor.
An examination of subjects or areas not included in other courses. May be taken more than once for credit. *Staff.*

## PSYC 388: Selected Topics

(1/2 Unit)
Prerequisite: PSYC 101 or permission of instructor.
An examination of subjects or areas not included in other courses. May be taken more than once for credit. *Staff.*

## PSYC 389: Selected Topics

(1 Unit)
Prerequisite: PSYC 101 or permission of instructor.
An examination of subjects or areas not included in other courses. May be taken more than once for credit. *Staff.*

## PSYC 395: Forensic Psychology

(1 Unit)
Prerequisites: PSYC 204, PSYC 251 and PSYC 265, or permission of instructor.
Explores the psychology of criminal behavior, from causes through prevention or intervention and ending with punishment and rehabilitation. Provides an understanding of the criminal mind, based on knowledge of developmental and abnormal psychology. *Staff.*

## PSYC 398: Practicum

(1/2 Unit)
Prerequisites: Permission of instructor and declared psychology major, human services concentration, or neuroscience concentration, junior or senior standing.
Supervised experience in an applied setting and the opportunity to reflect upon and evaluate this experience in a weekly group meeting. May be repeated once. Offered on a credit/no credit basis. *Keyes.*

## PSYC 399: Practicum

(1 Unit)
Prerequisites: Permission of instructor and declared psychology major, human services concentration, or neuroscience concentration, junior or senior standing.
Supervised experience in an applied setting and the opportunity to reflect upon and evaluate this experience in a weekly group meeting. May be repeated once. Offered on a credit/no credit basis. *Keyes.*

## PSYC 401: Seminar

(1/2 Unit)
Prerequisite: Junior or senior standing.

The study of a specific problem area in the discipline. Examples of topics include Psychology of Women and Men, History of Psychology, Psychology and Law, and Culture and Cognition. *Staff.*

### PSYC 402: Seminar

(1 Unit)
Prerequisite: Junior or senior standing.
The study of a specific problem area in the discipline. Examples of topics include Psychology of Women and Men, History of Psychology, Psychology and Law, and Culture and Cognition. *Staff.*

### PSYC 411: Directed Study

(1/2 Unit)
Highly recommended for majors. Admission is by permission of instructor. *Staff.*

### PSYC 412: Directed Study

(1 Unit)
Highly recommended for majors. Admission is by permission of instructor. *Staff.*

### PSYC 416: Senior Research Seminar

(1 Unit)
Prerequisite: Permission of instructor.
Guides students completing a senior thesis through all aspects of the research process. Focuses on data analysis, interpretation and reporting on the results of student research projects. Considers both theoretical and practical research issues. *Staff.*

## Public Policy and Service

### PBSV 101: Introduction to Public Service

(1 Unit)
Prerequisite: Membership in the Gerald R. Ford Institute for Leadership in Public Policy and Service.
Introduces new Ford Institute students to public policy and public service issues. Examines a broad range of themes including ethics, civic engagement, the history of public service in the United States and contemporary public policy concerns. Offered in the fall. *McLean.*

### PBSV 331: Urban Leadership

(.25 Unit)
Prerequisites: sophomore status and must be nominated by a member of the faculty
This course introduces students to leadership in an urban setting primarily through a week spent in a major city. Students learn from leaders in the areas of business, government, the nonprofit sector, journalism and academia and work in teams to address challenges faced by cities. Students should have sophomore status and be nominated by a faculty member.

### PBSV 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *McLean.*

### PBSV 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *McLean.*

### PBSV 397: Senior Colloquium

(1/2 Unit)
Prerequisite: Permission of instructor.
Analysis of selected public policy issues. Colloquium includes discussion of the economics, politics, social and ethical factors that go into the making of public policy. Offered in the spring. *McLean.*

### PBSV 401: Seminar

(1/2 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
*McLean.*

### PBSV 402: Seminar

(1 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
*McLean.*

### PBSV 411: Directed Study

(1/2 Unit)
*McLean.*

### PBSV 412: Directed Study

(1 Unit)
*McLean.*

## Religious Studies

Note: Courses in religious studies carry no prerequisites unless specified under the course listing. The 101 and 102 courses do, however, provide useful background for other courses in the department and thus are recommended for students who may elect more than one course in the department.

### RS 101: Introduction to Western Religions

(1 Unit)
An introduction to major Western religions as represented by Judaism, Christianity and Islam. Topics include the nature of religion and religious experience in the West; origins and development of each major religion; sacred

literature, formative myths, symbols and fundamental tenets; forms of religious expression, spirituality and worship; and the relationship to the world as seen in ethical orientations and institutions. *McWhirter, Mourad.*

## RS 102: Introduction to Eastern Religions

(1 Unit)
An introduction to major Eastern religions as represented by Hinduism, Buddhism, Confucianism, Taoism and Shinto. Topics include the nature of religion and religious experience in the East; origins and development of each major religion; sacred literature, formative myths, symbols and fundamental tenets; forms of religious expression, spirituality and worship; and the relationship to the world as seen in ethical orientations and institutions. *Valdina.*

## RS 104: Introduction to Islam

(1 Unit)
An introduction to the beliefs and practices of Islam in its various manifestations, with additional emphasis on the history, politics and gender issues that have both influenced and been influenced by Islam. Analyzes the information, and misinformation, on Islam as presented in the news media and on the Internet. *Valdina.*

## RS 121: History, Literature and Religion of the Old Testament

(1 Unit)
A developmental study of the major events, individuals and central religious and ethical ideas of ancient Israel, based on the literature of the Hebrew Bible and relevant data from the archaeology and history of the ancient Near East. *McWhirter.*

## RS 122: History, Literature and Religion of the New Testament

(1 Unit)
The New Testament and other writings of the early Christian period studied as literary, historical and ethical-religious sources for an understanding of Jesus, Paul and the emerging Christian movement. *McWhirter.*

## RS 131: Introduction to Christian Thought

(1 Unit)
Classical themes and modern variations: emotion and reason, world and God, death and self-transcendence, guilt and forgiveness, meaninglessness and the sense of the holy. *Mourad.*

## RS 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## RS 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## RS 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## RS 204: Islam and the Modern World

(1 Unit)
An examination of ideas and movements related to Islam's interaction with the West in the modern period, including Muslim intellectual responses to issues like colonialism, modernism, secularism, nationalism, democracy, science and women's rights. Also includes political developments in certain Islamic countries. *Valdina.*

## RS 205: Islamic Mysticism

(1 Unit)
An introduction to Islamic mysticism. Looks at the historical development of Sufism, its contributions to Islamic civilization and to the spread of Islam, its literature, key themes such as love and drunkenness, distinctive practices including music and dance, and the ways it has adapted to the modern world, including in the West. *Valdina.*

## RS 206: Women, Gender, Islam

(1 Unit)
Examines the role of gender, and the construction of gender, in the history of Islam. Begins with the historical roots of the topic and examines presentations of gender in the Qur'an and the early sources of Islam. Explores case studies in the contemporary world, including the contexts in Pakistan, India and Bangladesh. *Valdina.*

## RS 211: Hinduism

(1 Unit)
Indian philosophical world views, ritual expressions and moral orientations: Vedas, Upanishads, Bhagavad Gita, Vedanta. Offered occasionally. *Valdina.*

## RS 212: Buddhism

(1 Unit)
Spring Indian, Chinese and Japanese philosophical world views, ritual expressions and moral orientations. Theravada, Mahayana, Ch'an, Zen. Offered occasionally. *Valdina.*

## RS 215: Jewish Life and Thought

(1 Unit)
The world of Jewish life and thought as reflected in both ancient and modern Jewish writings. An analysis of selected biblical, rabbinic and medieval classics, as well as modern Jewish literature. *McWhirter.*

## RS 220: Legend, Wisdom, and Apocalypse

(1 Unit)
Historical and literary analysis of Jewish literature in the Second Temple Period, including the legends of Esther and Judith, the wisdom of Ben Sirach, the apocalyptic visions of Daniel and Enoch, and the Dead Sea Scrolls. Looks at how this body of work constitutes important background for Jewish and Christian origins. *McWhirter.*

## RS 222: Jesus and the Gospels

(1 Unit)
An investigation of five Gospels: the canonical Gospels of Matthew, Mark, Luke and John, along with the Gospel of Thomas. Historical and literary analysis, leading to an evaluation of their usefulness as sources for reconstructing the life and death of Jesus. *McWhirter.*

## RS 232: Faith and Reason

(1 Unit)
Explores epistemology, or the theory of knowledge, as it applies to religious belief. Focuses on the nature of faith and asks whether faith is irrational according to thinkers such as Blaise Pascal, John Locke, Karl Marx and Sigmund Freud. *Mourad.*

## RS 234: Philosophy of Religion

(1 Unit)
Philosophical examination of several classic religious problems, including the nature of God, the proofs of God's existence, the justification for evil and suffering, the rationality of belief in miracles and the nature of the afterlife. Offered occasionally. Same as PHIL 234. *Mourad.*

## RS 236: Religion and Nonviolence

(1 Unit)
This course charts the development of differing conceptions of religiously motivated political non-violence throughout the 19th and 20th centuries by way of several intergenerational, international and inter-religious conversations. We begin with the influence of American Quaker abolitionism on the work of Russian novelist and thinker Leo Tolstoy. We then shift to the letters exchanged between Tolstoy and the young M.K. Gandhi, and the influence of Tolstoy in Gandhi's formulation and practice of nonviolent resistance. Finally, we will study the influence of Gandhi's thought and work on American Civil Rights leaders like Howard Thurman, Bayard Rustin and Martin Luther King Jr., as well as Catholic pacifists like Dorothy Day, among many others. *Staff*

## RS 242: Christian Ethics

(1 Unit)
An introduction to the foundations and applications of Christian theological ethics. Investigates Christian perspectives on moral issues such as sex and marriage, medical ethics and social justice. *Mourad.*

## RS 250: Mysticism and Ecstasy

(1 Unit)
A study of mystical and ecstatic experiences focused primarily on the Christian tradition. Includes discussion of the limits and puzzles of mystical language and the value of religious experiences as evidence. Are mystics reasonable if they base their beliefs on religious experiences? Do their experiences provide any support for other people's religious beliefs? Offered occasionally. *Mourad.*

## RS 251: Yogis and Ascetics

(1 Unit)
What does it mean to want to renounce the world? When do the conditions of society cause us to want to transcend everyday life in a radical way? Explores the historical development of concepts of yoga and renunciation in South Asia as they extend into Hindu, Jain and Buddhist practices. Themes include the relation between dissent and social

responsibility, the difference between negation and affirmation, and the roles of wandering and control of the body in ascetic practices. *Valdina*.

## RS 261: Death and Dying

(1 Unit)
Human longing for a meaningful explanation of the mystery of death and dying is deep and universal. This comparative course examines a wide array of beliefs and rituals related to death and dying in a select number of world religions. In addition to gaining intellectual familiarity with cross-cultural beliefs and practices, students will be encouraged to analyze familiar religious and cultural practices surrounding death and dying. *Valdina.*

## RS 270: Liberation Theology

(1 Unit)
Examines Christian theological responses to poverty and social injustice emphasizing the theme of liberation. Includes analysis of liberation theology in 1960s Latin America and its influence on African American and feminist theologies in the U.S. Offered occasionally. *Mourad.*

## RS 287: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. May be taken more than once for credit. *Staff.*

## RS 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. May be taken more than once for credit. *Staff.*

## RS 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. May be taken more than once for credit. *Staff.*

## RS 320: Gender and Biblical Interpretation

(1 Unit)
Methods of biblical interpretation and their relation to gender construct in society and biblical authority. Offered in alternate years. *McWhirter.*

## RS 330: American Christianities

(1 Unit)
This course explores the history of Christian movements in the United States. We will focus on historical and contemporary segregation in black and white American Christian denominations as well as various theological reponses to racial division and racism. *Ronney Mourad*

## RS 387: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## RS 388: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## RS 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## RS 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. Offered on demand. *Staff.*

## RS 392: Internship

(1 Unit)
Offered on a credit/no credit basis. Offered on demand. *Staff.*

## RS 401: Seminar

(1/2 Unit)
Topics of special interest. Past seminars have included "C.G. Jung and Individuation," "Religion and Existentialism," "Theology of Sex and Marriage" and "Seminar on Ministry." Offered occasionally. *Staff.*

## RS 402: Seminar

(1 Unit)
Topics of special interest. Past seminars have included "C.G. Jung and Individuation," "Religion and Existentialism," "Theology of Sex and Marriage" and "Seminar on Ministry." Offered occasionally. *Staff.*

## RS 411: Directed Study

(1/2 Unit)
Prerequisite: Upperclass standing.
Recent directed study topics have included "The Image of Mary Magdalene in Tradition"; "Yoga and Integration"; "Religious Perspectives on Marriage"; C.S. Lewis; Niebuhr's Social Ethic; Philosophical Theology of Hans Kung; and "The Theology of Paul Tillich." Hebrew and Greek are also taught regularly as directed studies. *Staff.*

## RS 412: Directed Study

(1 Unit)
Prerequisite: Upperclass standing.
Recent directed study topics have included "The Image of Mary Magdalene in Tradition"; "Yoga and Integration";

"Religious Perspectives on Marriage"; C.S. Lewis; Niebuhr's Social Ethic; Philosophical Theology of Hans Kung; and "The Theology of Paul Tillich." Hebrew and Greek are also taught regularly as directed studies. *Staff.*

# Sociology

## SOC 101: An Introduction to Sociology

(1 Unit)
Provides students with the analytic tools for adopting a sociological perspective in order to better understand their own lives and the lives of others. Emphasis on how sociologists think about the social world, how they research that world, and what we know about the social world based on sociological research. From our most personal experiences such as our identities and our interactions with others to the broader organization of institutions such as family, government, media, religion, economy and education, students will be encouraged to explore how social forces shape their own experiences and life chances and the experiences and life chances of others. *Melzer, Verduzco-Baker, Staff.*

## SOC 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## SOC 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## SOC 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## SOC 222: Sociology of Childhood

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or permission of instructor.
Uses sociological theory and research findings to examine childhood and adolescence as historical constructs and social contexts (rather than developmental moments) and children as social actors in their own right (not only adults in the making). Pays particular attention to how race, class and gender shape experiences of childhood as we investigate what it means to be a child or adolescent in the United States, how children's lives are shaped by their social contexts and how children as social actors shape the worlds in which they live. *Verduzco-Baker.*

## SOC 225: Criminology

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or permission of instructor.
An introduction to the sociological study of crime, including varying definitions, causes, consequences, and societal responses. Scrutinizes multiple criminological theories (structural and interactionist), research methods, patterns in crime data, and public perception/media coverage, placing crime in a socio-historical context. Issues include criminal occupations, property crime, victimless crime, organized crime, white-collar crime, gangs, sex offenders, intimate violence and capital punishment. *Melzer.*

## SOC 228: Cities & Urban Life

(1 Unit)
ANTH 105 or SOC 101, or permission of instructor.
Today, over half of the world's people live in urban areas, and there is every indication that the future of human society will be dominated by cities. Increasingly, then, the study of society is the study of urban society. This course examines the spatial organization of contemporary cities, their internal structure, their place in the world system, the persistent issue of concentrated urban poverty and other social problems endemic to modern cities. Special attention will be given to the experiences of inner-city minority populations. *Schoene.*

## SOC 230: Men and Masculinities

(1 Unit)
Prerequisite: SOC 101, or Women's and Gender Studies 111, or permission of instructor.
Examines how people are transformed into boys/men who interact in the social world through shared gendered meanings. Analyzes various socio-historical constructions of masculinity both in the United States and beyond, paying particular attention to how these differ over time, across cultures and within subcultures. Focuses on gender as a central organizing principle of society, and how this socially constructed characteristic affects individuals, society and, quite literally, the world. Discusses structural inequalities, cultural similarities and differences, intersectionality, and individual issues related to masculinities. (This is an Inside-Out Prison Exchange Program course, whereby Albion College students travel to a local correctional facility to join incarcerated students for a semester long seminar.) *Melzer.*

## SOC 235: Global Transformations

(1 Unit)
Prerequisite: ANTH 105 or SOC 101 or permission of instructor.
Is "globalization" just a marketing slogan or does it actually describe a process involving profound change in life on this planet? Topics include communication and transportation technologies, political and economic developments, commerce and consumerism in the modern world. Considers relationships between the global and the local and explores whether the changes associated with globalization are best considered as progress or problem. *Staff.*

## SOC 247: Sociology of Terrorism

(1 Unit)
ANTH 105 or SOC 101, or permission of instructor.
Terrorism has emerged as one of the major destabilizing elements of globalization, and remains a persistent problem in the modern world. This course serves as an introduction to the sociological study of terrorism. Topics include the economic, environmental, cultural and social conditions that lead to terrorism, the behavior of terrorist actors, cross-national networks of terror, the relationship between terrorists and mass media, and the world's response both to ideologies of terror and specific incidents of terror. *Schoene.*

## SOC 280: Children of Immigrants

(1 Unit)
SOC 101 or ETHN 103 or ANTH 105 or permission of instructor.
Same as ETHN 280. *Verduzco-Baker, Staff.*

## SOC 287: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. May be taken more than once for credit. *Staff.*

## SOC 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. May be taken more than once for credit. *Staff.*

## SOC 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. May be taken more than once for credit. *Staff.*

## SOC 312: Sociological Theory

(1 Unit)
Prerequisite: SOC 101 and junior standing, or permission of instructor.
An overview of sociological theory from classical to contemporary, and an assessment of how these theories frame research and analysis. Theorists range from the foundational work of Marx, Durkheim and Weber, to the more recent work of Parsons, Goffman and a number of critical and post-structuralist authors. Highly recommended for students who intend to do graduate work in the social sciences. *Verduzco-Baker.*

## SOC 323: Qualitative Social Research

(1 Unit)
Prerequisite: SOC 101 and junior standing, or permission of instructor.
An overview of qualitative social research methods with a focus on three key forms: ethnography, document analysis and interview. Examines research design and a variety of types of data collection and analysis as well as considering ethical issues in social research. Students design and carry out their own research project based on that semester's theme. *Verduzco-Baker.*

## SOC 324: Quantitative Social Research

(1 Unit)
Prerequisite: SOC 101 and junior standing, or permission of instructor.
An overview of quantitative social research methods and statistics. Topics include problem formulation and connection between theories and research; research designs, measurement and sampling techniques; ethical issues in research; data processing and data analysis with discussion of descriptive statistics; hypothesis testing and chi-square tests of significance; correlation; and multiple regression models. Students design and carry out their own independent research projects in addition to an extensive application of SPSS in laboratory assignments using secondary data. *Staff.*

## SOC 328: Global Urbanism

(1 Unit)
ANTH 105 or SOC 101, or permission of instructor.
Over half of the world's population currently resides in cities. Furthermore, 90% of all future population growth is projected to take place in cities of the developing world. This course serves as an examination of global urban development with a special focus on the geopolitical South. Topics include the divergent development pathways of Western and Global cities, post-colonial cities, urban labor markets, rural-urban migration, cities in crisis, slum housing, urban infrastructure, urban governance and others. Students will have the opportunity to carry out their own project analyzing a social problem in a city of their choosing. *Schoene.*

## SOC 333: The Sociology of Sex and Gender

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or WGS 111, or permission of instructor.
Examines the social construction and social consequences of gender difference and gender inequality with a specific focus on the United States. Gender theory and research will be used to explore masculinity and femininity as identities, as behavioral expectations and as organizing features of social life. Covers belief systems; broad social institutions such as family, employment, media and health; experiences of sexuality and violence; and individual behavior such as personal styles and modes of interacting with others. Focuses on how gender as an organizing feature of social life benefits some and is disadvantageous to others, paying special attention to how race, ethnicity, class and sexuality intersect with gender. Gender theory and research will be used to explore masculinity and femininity as identities, as behavioral expectations and as organizing features of social life. *Melzer*.

## SOC 345: Race and Ethnicity

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 or ETHN 103 or permission of instructor.
Alternative theories of racial and ethnic relations, and their application to groups within the United States. Particular attention will be focused on the reasons for ethnic conflict and strategies for conflict resolution. *Verduzco-Baker.*

## SOC 352: European Integration

(1 Unit)
SOC 101 or ANTH 105 and junior standing or permission of instructor.
This course provides an in-depth examination of contemporary European issues post-1989. Of special interest will be the social challenges of integrating vastly disparate societies into an economic, political and social union. Europe, both as a continent and an idea, stands at a crossroads. The course will begin with an overview of the purpose of new Pan-European intuitions and the competing forces of integration and resistance. Next, the course explores various social problems Europe as a whole must confront: peace & security, economic crisis, belonging and exclusion, fertility and others. Finally, the course concludes by examining the potential future of European society. *Schoene.*

## SOC 356: Social Psychology: Sociological Perspectives

(1 Unit)
Prerequisite: SOC 101 and junior standing or permission of instructor.
The study of the relationship between personal experiences and society. Explores how our sense of self, identity, subjective experience, feelings, beliefs, and relationships to and interactions with others are shaped by and influence social life. Focuses on theoretical traditions and trends within micro-sociology and their applications and usefulness for empirical research. Special attention will be paid to connecting the micro-workings of social life to larger institutional, cultural and political processes and issues. *Melzer.*

## SOC 360: Intimate Violence

(1 Unit)
Prerequisites: SOC 101 or WGS 111 and junior standing or permission of instructor.
Examines violence between intimates, primarily (but not solely) within the United States, covering a range of interpersonal relationships (children, parents, spouses, partners, acquaintances, siblings, etc.) as well as various forms of abuse (emotional, physical, neglect, sexual assault/rape, etc.) Traces intimate violence socio-historically, including theoretical, methodological, empirical and applied issues and debates within the field. Analyzes the incidence and prevalence of intimate violence, and, in the process, attempts to identify causes and solutions. Focuses on the importance of structural gender inequality in shaping individuals' violent behavior and the degree to which gender inequality influences various forms of violence. *Melzer.*

## SOC 370: Social Mobility and Inequity

(1 Unit)
Prerequisite: SOC 101 or ANTH 105 and junior standing or permission of instructor.
An examination of the changing patterns of social stratification within the U.S. since World War II. Topics include income and wealth inequality, education and social mobility, the reorganization of the workplace, poverty and social welfare. *Verduzco-Baker*.

## SOC 387: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## SOC 388: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## SOC 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## SOC 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

## SOC 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

## SOC 401: Seminar

(1/2 Unit)
*Staff.*

## SOC 402: Seminar

(1 Unit)
*Staff.*

## SOC 408: Senior Paper

(1 Unit)
Prerequisite: Senior standing, a major in the department.
An intensive study and written paper emphasizing a topic in either anthropology or sociology. *Staff.*

### SOC 411: Directed Study

(1/2 Unit)
*Staff.*

### SOC 412: Directed Study

(1 Unit)
*Staff.*

## Spanish

For those students with previous experience in Spanish, a placement test will be used in order to determine the appropriate entry-level course. Only those students who have had no previous experience with Spanish may initially enroll in SPAN 101. In order to ensure classes of relatively equal skill levels, the professor reserves the right to reassign any student who does not seem appropriately qualified for the course in which he or she has enrolled.

### SPAN 101: Elementary Spanish

(1 Unit)
Introduces Spanish language and Hispanic culture through the contextualized study of grammatical concepts and vocabulary. Develops the four essential skills—reading, writing, listening and speaking—necessary for the interpersonal, interpretive and presentational modes of communication. Conducted in Spanish. Tutorials with teaching assistants are integrated into the course. *Staff.*

### SPAN 102: Elementary Spanish, continued

(1 Unit)
Proficiency Expected level of proficiency: SPAN 101, appropriate score on departmental placement test or permission of instructor.
Continuation of SPAN 101. Expands vocabulary, grammar and cultural knowledge to enable a more informed interpretation and production of written and spoken communication in Spanish. Conducted in Spanish. Tutorials with teaching assistants are integrated into the course. *Staff.*

### SPAN 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### SPAN 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### SPAN 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## SPAN 201: Intermediate Spanish: Societies in Transition

(1 Unit)
Proficiency Expected level of proficiency: SPAN 102, appropriate score on departmental placement test or permission of instructor.
Development of the four skills necessary to acquire a second language at an intermediate level (listening, speaking, reading and writing) and an examination of crucial and interesting information about the societies and cultures that serve as context for the Spanish language and how those societies have changed and continue to evolve. Conducted in Spanish. Tutorials with teaching assistants are integrated into the course. *Staff.*

## SPAN 202: Intermediate Spanish: Arts and Media

(1 Unit)
Proficiency Expected level of proficiency: SPAN 201 or permission of instructor.
Development of the four skills necessary to acquire a second language at an intermediate level (listening, speaking, reading and writing) and an examination of identity in media and the arts in the Spanish-speaking world. Conducted in Spanish. Tutorials with teaching assistants are integrated into the course. *Staff.*

## SPAN 203: Intermediate Spanish: Identity Through Music and Film

(1 unit)
Proficiency Expected Level: SPAN 102, appropriate score on departmental placement test, or permission of instructor.
In this course, students will develop four fundamental language skills in Spanish: listening, speaking, reading and writing. Students will further develop their cross-cultural and intercultural skills as they learn about the diverse cultures of Latin America through reading about and leistening to the region's music. Conducted in Spanish. Tutorials with teaching assistants are integrated into the course. *Barrios.*

## SPAN 287: Selected Topics

(1/4 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## SPAN 288: Selected Topics

(1/2 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## SPAN 289: Selected Topics

(1 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## SPAN 300: Spanish for Heritage Speakers

(1 Unit)
Prerequisite: Determined by Placement Exam or Instructor's Permission
The course is designed for students who were raised in a home where Spanish is spoken, who speak or understand

Spanish, and are to some degree bilingual in English and Spanish. The course will include composition and conversation, with a focus on aspects of grammar and vocabulary that are of particular interest to heritage learners. Assignments will be based on a variety of readings about contemporary issues of importance to the Spanish-speaking world. Conducted in Spanish. Lecture *Staff*

## SPAN 301: Advanced Oral and Written Expression

(1 Unit)
Proficiency Expected level of proficiency: SPAN 202, appropriate score on departmental placement test or permission of instructor.
Development of communication skills in Spanish relative to grammar, syntax, appropriate registers, necessary vocabulary, non-verbal cues and culturally specific idiomatic usage. Also includes the processes of conversation development, thesis formation and strategies for argumentation operating within Hispanic cultural norms, as well as key contemporary issues of importance to the Spanish-speaking world. Conducted in Spanish. Tutorials with teaching assistants are integrated into the course. *Staff.*

## SPAN 302: Advanced Oral and Written Expression through Hispanic Film

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
Development of communication skills in Spanish relative to grammar, syntax, appropriate registers, necessary vocabulary, non-verbal cues and culturally specific idiomatic usage. Also includes the processes of conversation development, thesis formation and strategies for argumentation operating within Hispanic cultural norms, as well as key contemporary issues of importance to the Spanish-speaking world. Improves fluency through the viewing, analysis and interpretation of Hispanic film. Conducted in Spanish. Tutorials with teaching assistants are integrated into the course. *Staff.*

## SPAN 303: Spanish for the Professions

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
Designed for students who are interested in studying Spanish in the context of activities related to the professional world (business, health care, education, finance, law, social work, etc.). Emphasizes the specialized vocabulary of the professional world and requires a working knowledge of Spanish grammar. Includes topics ranging from specific professions, to generalized professional concerns, to translation. Conducted in Spanish. *Staff.*

## SPAN 304: Advanced Oral and Written Expression through Creative Writing

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
Focus will vary, but may include the following: "Spanish/Latin American/ U.S. Latino Theatre," "Spanish/Latin American/ U.S. Latino Short Story" and "Spanish/Latin American/ U.S. Latino Poetry." Introduces the respective genre through readings of literary works and critical and theoretical studies. Includes development of a portfolio of creative writing projects produced individually and collaboratively. Conducted in Spanish. *Oswald.*

## SPAN 305: Multicultural Spain: Historical Perspectives and Current Issues

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
Explores Spanish society as a dynamic multicultural construct—Spain's changing role in the world; the intersection of Castilian, Galician, Andalusian, Catalan and Basque cultures; shifting demographics, etc.—through the study of

historical and literary texts, media sources, and other pertinent cultural artifacts. Studies the historical dimensions of the social phenomena and the historical reasons for the contemporary social, political and cultural situation. Conducted in Spanish. *Oswald.*

## SPAN 306: South American Identities and Cultural Perspectives

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor. Examination of past, present and future struggles for identity and cultural perspective in South America, with a focus on the Southern Cone and Andes regions. Explores cultural artifacts such as music, visual arts, performance arts, literature, popular culture and folklore in South America from the pre-Columbian period to the twenty-first century. Conducted in Spanish. *Staff.*

## SPAN 307: Cultural Encounters: Caribbean, Central and North America

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor. Examines past, present and future struggles of cultural encounters and production in the Spanish-speaking Caribbean, Mexico and Central America. Explores cultural artifacts such as music, visual arts, performance arts, literature, popular culture and folklore from the legacy of the pre-Columbian period to the twenty-first century and considers this region's growing interaction with the United States. Conducted in Spanish. *Staff.*

## SPAN 310: Composition for Heritage Speakers

1 unit
Prerequisite: Placement into Spanish 300 or instructor approval. Cannot be taken with Spanish 302.
This class is intended for students who grew up in Spanish-speaking households. Students will work towrds strengthening their reading and writing skills in Spanish, with a focus on the types of grammar and spelling challenges faced by heritage speakers. Students will also learn about Latin American cultures and identities by vieweing and anlyzing films from the Spanish-speaking world. *Barrios.*

## SPAN 314: Storytellers

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
An introduction to the workings of storytelling. Focuses on the short story as a genre to explore the different ways of narrating through key literary and cultural movements that have defined the Spanish-speaking world, including the oral and pre-Columbian traditions, romanticism, modernism and magical-realism. Conducted in Spanish. *Staff.*

## SPAN 315: Narrative Arts in the Spanish-Speaking World: Textual Analysis and Interpretation

(1 Unit)
Proficiency Expected level of proficiency: SPAN 300 or SPAN 301 or equivalent, or permission of instructor.
An introduction to the analysis, interpretation and appreciation of literature and cultural production from the Spanish-speaking world. Emphasis will be placed on short story, novel, theatre and film. Each analysis will include a detailed study of the work itself, and an examination of how the work is a product of and influences its cultural context. We will also introduce other critical approaches that are useful for a specific work, genre or subgenre. Conducted in Spanish. *Staff.*

## SPAN 316: Cultural Production in the Spanish

(1 Unit)
Prerequisites: SPAN 300 or SPAN 301 or permission of the instructor
An introduction to the analysis, interpretation and appreciation of cultural production from the Spanish-speaking world. This course will focus on poetry, music and painting (and on occasion may include sculpture, photography, architecture, performance art, etc.). Each analysis will include a detailed study of the work itself, and an examination of how the work is a product of and influences its cultural context. We will also introduce other critical approaches that are useful for a specific work, genre or subgenre. Conducted in Spanish. *Staff*

## SPAN 350: Gender in the Spanish-Speaking World

(1 Unit)
Proficiency Expected level of proficiency: SPAN 314 or SPAN 315 or permission of instructor.
Students will analyze how gender is constructed and represented in Spanish-speaking societies through the examination of a wide range of cultural artifacts (i.e. literature, film, media) from the Spanish-speaking world. Writing assignments will assess students' comprehension of texts and their ability to incorporate critical analysis within the theoretical context of gender. Conducted in Spanish. *Staff.*

## SPAN 360: Key Issues in Spanish Peninsular Literature and Culture

(1 Unit)
Proficiency Expected level of proficiency: SPAN 305 or SPAN 314 or SPAN 315, or permission of instructor.
Analysis of a special problem, topic, issue, phenomenon, period, author, genre or movement in Spanish Peninsular Literature and/or culture from its beginning to the present. Conducted in Spanish. *Oswald.*

## SPAN 361: Key Issues in Latin American Literature and Culture

(1 Unit)
Proficiency Expected level of proficiency: Spanish 306 or 314 or 315, or permission of instructor.
Analysis of a special problem, topic, issue, phenomenon, period, author, genre or movement in Latin American literature and/or culture from its beginning to the present. Conducted in Spanish. *Staff.*

## SPAN 362: Latinx Literature and Cultures in the United States

(1 Unit)
Proficiency Expected level of proficiency: SPAN 307 or SPAN 314 or SPAN 315, or permission of instructor.
Analysis of a special problem, topic, issue, phenomenon, period, author, genre or movement in U.S. Latino or Chicano literature and/or culture from its beginning to the present. Conducted in Spanish. *Staff.*

## SPAN 372: Afro-Latinx: TransAmerican Identities and Histories

(1 unit)
Proficiency Expected Level of proficiency - SPAN 306 or 307, or permission of instructor.
This course examines the black experience in Latin America, beginning with the TransAtlantic Slave Trade, up to contemporary social movements in the United States, Venezuela, Colombia, Cuba, Brazil, and the island of La Hispaniola (the Dominican Republic and Haiti). The content of the course will include literature, film, and music in Spanish, or translated to English from Haitian Creole and Portuguese. *Barrios*

## SPAN 387: Selected Topics

(1/4 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## SPAN 388: Selected Topics

(1/2 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## SPAN 389: Selected Topics

(1 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## SPAN 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

## SPAN 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

## SPAN 398: Practicum

(1/2 Unit)
Experience in language teaching in the classroom or with individual students under the close supervision of a regular instructor. Offered on a credit/no credit basis. *Staff.*

## SPAN 401: Seminar

(1/2 Unit)
Proficiency Expected level of proficiency: SPAN 314 or SPAN 315 or permission of instructor.
Variable topic seminar. Conducted in Spanish. *Staff.*

## SPAN 402: Seminar

(1 Unit)
Proficiency Expected level of proficiency: SPAN 314 or SPAN 315 or permission of instructor.
Variable topic seminar. Conducted in Spanish. *Staff.*

## SPAN 411: Directed Study

(1/2 Unit)
Directed studies generally are reserved for those students who have schedule conflicts between two majors. They are also available for students pursuing honors theses. In specific cases, students may request directed studies that cover

topics beyond the scope of the current curriculum. These students are expected to present their proposed plan of study to the instructor for approval well in advance of registration. *Staff.*

### SPAN 412: Directed Study

(1 Unit)
Directed studies generally are reserved for those students who have schedule conflicts between two majors. They are also available for students pursuing honors theses. In specific cases, students may request directed studies that cover topics beyond the scope of the current curriculum. These students are expected to present their proposed plan of study to the instructor for approval well in advance of registration. *Staff.*

## Theatre

### THEA 100: Theatre Production Seminar

0 units
All Theatre majors are required to enroll in THEA 100, Theatre Production Seminar, every semester. This seminar is a means of holding majors accountable for the required production participate component of the Theatre major. Students may not receive more than 2 "NC" grades while a declared theatre major. Theatre minors are required to enroll in THEA 100 during spring semester only. *Fischer*

### THEA 110: Introduction to Scenic Painting

(1 Unit)
A hands-on study of the techniques and applications of 2D scenic painting in the theatre. In this course students will learn the techniques of creating faux textures including,
but not limited to, marble, bricks, wood, and fabric. Additionally, students will study foam sculpting, distressing, and antiquing. *Staff*

### THEA 111: Theatre Arts

(1 Unit)
A study of the nature and foundation of theatre as a unique art form. The course explores the elements which make up dramatic production, the theatre's historical development and how the theatre relates to contemporary life Not recommended for theatre majors and minors. *Staff.*

### THEA 123: The Elements of Design

(1 unit)
In this course, students will be introduced to the basic elements and principles of design. Through hands-on projects, critical analysis and discussion, students will develop the skills to create, articulate and practically apply design concepts. *TenHulzen.*

### THEA 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### THEA 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## THEA 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## THEA 209: Dramatic Analysis

(1 Unit)
An introduction to dramatic and theatrical analysis, focusing on how a theatre text works both on the page and on the stage. Students discover "how a play means" by exploring different theoretical approaches and dramatic traditions and performing both dramatic and theatrical analyses. *Staff.*

## THEA 210: Women in the American Theatre

(1 Unit)
An examination of the contributions of women in all aspects of the American Theatre; a study of the images of women as portrayed in American drama; an introduction to feminist theory and criticism as it relates to theatre and drama. *Staff.*

## THEA 211: Stagecraft and Theatrical Technology

(1 Unit)
Prerequisites: THEA 111, THEA 209 or permission of instructor.
This course will provide an introduction to, and give students practical working knowledge of, the technical skills used in theatre. Specially, scenic construction, painting, lighting, and sound technology. *Klain.*

## THEA 220: Costume and Prop Craft

(1 Unit)
An introduction to aspects of costume and theatrical property design and artisanship including professional presentation skills, basic sewing, millinery (hat making), apparel and textiles terminology, painting and dying science, leatherwork, wig styling, and armor work. Includes costume lab work and hands-on design and construction projects. *Staff.*

## THEA 221: Theatrical Costume Design

(1 Unit)
This course covers the principles, elements and practicalities of costume design for the theatre and their relationship to the performing arts. Students will learn how to communicate design choices both visually and verbally through rendering techniques and research. A variety of historical as well as geographical periods will be assigned. *Staff*

## THEA 222: Shakespeare

1 unit
Prerequisistes: One of the following: Completion with a 2.0 or better of THEA 209, THEA 280, or one course numbered ENGL 120 to ENGL 189; or junior standing.
Examines the language and performance in Shakespeare's plays and poetry with particular attention to the representation of gender. Same as ENGL 222. *MacInnes*

## THEA 251: Acting I

(1 Unit)
An introduction to the essential methods and techniques of acting. The semester will be comprised of a progression of exercises and projects intended to expand mental, emotional, and physical awareness, culminating in script analysis and scene work from full-length plays. No previous experience is required. *Fischer*

## THEA 280: Theatre History 1: BC - 1700

(1 Unit)
An examination of the major periods of theatre history, theatre architecture and conventions, and dramatic literature of oral and ancient cultures through the theatres of Absolutism. Offered alternate semesters with THEA 281. Offered periodically. *Staff.*

## THEA 281: Theatre History 2: 1700 - Present

(1 Unit)
An examination of the major periods of theatre history, theatre architecture and conventions, and dramatic literature of oral and ancient cultures through the theatres of Absolutism. Offered alternate semesters with THEA 280. Offered periodically. *Staff.*

## THEA 287: Selected Topics

(1/4 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## THEA 288: Selected Topics

(1/2 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## THEA 289: Selected Topics

(1 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## THEA 314: Stage Management

(1/2 Unit)
Covers the mechanics and methods of theatrical stage management/production management, including running rehearsals and performances, and the rules of the Actors' Equity Association. Presents the basics of production stage management such as scheduling and budgeting. Offered periodically. *Staff.*

## THEA 333: Plays of the 21st Century

(1 unit)
Prerequisite: THEA 209.

Focusing on plays of the last twenty years, we will delve into how they are changing the theatrical landscape. Are we in fact in a new golden age of American playwrighting? We will intensely analyze the playwrights, the developing styles and trends, as well as the issues raised by these recent works. We will also explore the difficulties of producing these works and the changing theatrical audience. *Staff.*

## THEA 350: Directing for the Stage

(1 Unit)
Prerequisites: THEA 209, THEA 211, and THEA 251, or permission of instructor.
This course explores the function and responsibilities of the director in a stage production. Class time will be divided between round-table discussion and hands-on staging of numerous scenes from published plays, students will find their own voice and practice as directors. *Fischer*

## THEA 361: Voice & Movement for the Stage

(1 Unit)
Prerequisite: THEA 251 or permission of instructor.
This class will expand students' awareness, understanding, and range of vocal production and character physicality. We will explore the basic physiology behind breath, speech, tension, and flexibility, as we broaden the performer's vocal and physical "vocabulary." *Fischer*

## THEA 365: Acting Shakespeare Process & Performance

(1/2 Unit)
Prerequisite: THEA 251 or permission of instructor.
This class will develop a specific methodology and practice for the actor approaching a Shakespearean character. Students will learn to fuse Shakespeare's heightened
language and verse with the contemporary psychologically-driven approach to acting. Emphasis will be placed on extensive "table work" prior to performance, where etymology, language mechanics, and scansion will be mined for playable action and nuance. The ultimate goal of the semester is to empower actors with a systematic, repeatable process for engaging any classical text with confidence and boldness. *Staff.*

## THEA 366: Acting II

(1 unit)
Prerequisite: THEA 251 or permission of instructor.
This course continues the exploration of concepts and methods introduced in Acting I, with specific emphasis on textual analysis and character interpretation in plays from various periods and genres. Students will deepen their characterization abilities, facility with language, and audition technique through scene study and physical and vocal exercises. *Fischer.*

## THEA 387: Selected Topics

(1/4 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

## THEA 388: Selected Topics

(1/2 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

### THEA 389: Selected Topics

(1 Unit)
Prerequisite: Permission of instructor.
An examination of subjects or areas not included in other courses. *Staff.*

### THEA 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

### THEA 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

### THEA 401: Theatre Senior Capstone

.5 units
Prerequisites: Senior class standing.
During their senior year, all majors must complete one semester of THEA 401, Theatre Senior Capstone, in partial fulfillment of the senior capstone project defined in the requirements for the theatre major. THEA 401 provides credit and creates accountability for the senior theatre major's work on their capstone production assignment. *Fischer*

### THEA 402: Seminar

(1 Unit)
Prerequisite: Junior or senior standing or permission of instructor.
Detailed study of significant and relevant problems in theatre. Specific topic for consideration each year will be determined before fall registration. *Staff.*

### THEA 411: Directed Study

(1/2 Unit)
*Staff.*

### THEA 412: Directed Study

(1 Unit)
*Staff.*

## Theatre: Practicum

### THEA 175: Theatre

(1/4 Unit)
Prerequisite: Permission of instructor.
Acting, direction, assistant direction, production design. *Staff.*

### THEA 176: Theatre

(1/2 Unit)
Prerequisite: Permission of instructor.
Acting, direction, assistant direction, production design. *Staff.*

## Wellness

A maximum of four activity courses (100 level, 1/4 unit) in physical education and theatre (dance) may be used toward completing the 32 units required for graduation.

### WELL 110: LifeHack: Resilience and Wellbeing

(.25 Unit)
Provides an opportunity to explore personal wellbeing, including its physical, emotional/mental, social, and environmental dimensions, through the lenses of mindfulness and positive psychology and with an eye toward improving resilience. *Croce*

### WELL 123: Riding—English

(1/4 Unit)
English riding skills, with a strong emphasis on safety and confidence-building in the saddle. Lessons are taught at the Held Center twice a week. Students are assessed on their first day to determine their experience and ability. Students may ride their own horse or use a school horse. Riders must wear an ASTM/SEI certified helmet, which may be borrowed from the Held Center. Appropriate attire and footwear are required for lessons. All riders must pass a simple physical fitness test given at the beginning of the semester. (Course fee.) *Staff.*

### WELL 124: Riding—Western

(.25 Unit)
Western riding skills, with a strong emphasis on safety and confidence-building in the saddle. Lessons are taught at the Held Center twice a week. Students are assessed on their first day to determine their experience and ability. Students may ride their own horse or use a College horse. Riders must wear an ASTM/SEI certified helmet, which may be borrowed from the Held Center. Appropriate attire and footwear are required for lessons. All riders must pass a simple physical fitness test given at the beginning of the semester. (Course fee.) *Staff.*

### WELL 131: Scuba

(1/4 Unit)
The development of skills, knowledge and activity for certification in scuba. (Course fee.) *Staff.*

### WELL 141: Aquatics

(1/4 Unit)
Beginner through advanced levels of swimming and or diving. *Staff.*

## WELL 147: Body Building and Development

(1/4 Unit)
Prescribed and therapeutic exercises designed to develop the body to a high degree of physical efficiency. *Staff.*

## WELL 152: Meditation

(1/4 Unit)
Explores a variety of meditation and mindful practices designed to offer a way of dealing with stress and build a foundation for understanding the inner self to maintain balance and offer new possibilities of being in the world. *Staff.*

## WELL 153: Yoga I

(1/4 Unit)
Introduces the use of yoga for health. Emphasizes the physical aspects of the practice through stretching and strengthening the muscles, joints, and spine, and directing blood and oxygen to the internal organs. *Staff.*

## WELL 154: Pilates I

(1/4 Unit)
An introduction to this wellness program based on the use of breathing techniques, concentration, body control, self-centering, precision movements and flow. *Staff.*

## WELL 156: Yoga II

(1/4 Unit)
Prerequisite: WELL 153 or permission of instructor.
A continuation of WELL 153. *Staff.*

## WELL 157: Pilates II

(1/4 Unit)
Prerequisite: WELL 154 or permission of instructor.
A continuation of WELL 154. *Staff.*

## WELL 158: Disc Golf

(1/4 Unit)
An introduction to the skills, equipment, rules and strategies for playing disc golf. *Staff.*

## WELL 163: Racquetball

(1/4 Unit)
Basic strokes, rules, equipment, game tactics and strategy. The history and traditions of racquetball. Eye protection and playing equipment not provided. *Staff.*

## WELL 165: Badminton and Tennis

(1/4 Unit)
The development of badminton and tennis skills, strokes, principles and strategies. *Staff.*

## WELL 166: Beginning Tennis

(1/4 Unit)
The development of tennis skills, strokes, principles and strategies. *Staff.*

## WELL 167: Beginning Golf

(1/4 Unit)
The development of basic golf skills, knowledge and strategies. *Staff.*

## WELL 168: Intermediate Golf

(1/4 Unit)
*Staff.*

## WELL 169: Intermediate Tennis

(1/4 Unit)
The development of stroke consistency, shot direction, and singles and doubles strategy. *Staff.*

## WELL 170: Advanced Tennis

(1/4 Unit)
Prerequisite: WELL 169 or permission of instructor.
Repetition of strokes, charting, match play, percentage play, singles strategy, doubles strategy, tournament play, conditioning and sportsmanship. *Staff.*

## WELL 172: Bowling

(1/4 Unit)
The development of basic bowling skills. Bowling fees will be charged. *May.*

## WELL 178: Canoeing

(1/4 Unit)
Recreational and racing canoe skills, terminology and river reading. Class meets first eight weeks. (Course fee.) *Staff.*

## WELL 181: Life Guarding

(1/4 Unit)
Prerequisite: American Red Cross swimmer or equivalent.
American Red Cross certification in CPR, standard first aid and lifeguarding can be earned. (Course fee.) *Staff.*

## WELL 182: Life Guarding

(1/2 Unit)
Prerequisite: American Red Cross swimmer or equivalent.
American Red Cross certification in CPR, standard first aid and lifeguarding can be earned. (Course fee.) *Staff.*

### WELL 192: Cardiovascular Conditioning

(1/4 Unit)
Various motor activities are used to stress the cardiovascular system. Designed to strengthen and improve the efficiency and endurance of the cardiovascular system. Appropriate shoes required. *Staff.*

## Women's, Gender, and Sexuality Studies

### WGS 111: Introduction to Women, Gender and Sexuality

(1 Unit)
The goal of this interdisciplinary course is to introduce students to the fields of women's, gender, and sexuality studies. Students will learn core concepts and historical and current theories that analyze women's positions, gender realities and sexual identities and cultures. This course also has a particular focus on social construction of differences and how these central issues interact with race, class, ethnicity, culture, age and abilities. Each semester students will explore four topics in depth: intersectional identities, violence, public policy and economics/work. They will also apply WGS analyses to current events and the media. *Staff*

### WGS 187: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### WGS 188: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### WGS 189: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

### WGS 240: Sexualities, Histories and Culture

(1 Unit)
Examines how sexuality has emerged as the basis for academic inquiry and numerous identities in the late twentieth century. Part I examines the historical research on sexuality across various cultures, considering what changes, from economic through technological, have fostered the development of sexuality-related laws, restrictions, identities and opportunities. Part II traces the theories about contemporary identities that emerged from women's and gender studies research, assessing medical, academic, religious and legal institutions as well as the grassroots resistance and alternative naming presented by individuals and communities. In Part III, students in each class have the opportunity to determine some of the topics covered. *Staff*

### WGS 250: Gender and the Global Garden

Which environmentalists have won the Nobel Peace Prize? Who are the writers and scholars shaping our analyses of our food systems? Who are the global farmers? Where do gender and other identity issues fit into our responses to these questions? This class is situated at the junction of gender, environmental and food studies. Using interdisciplinary and intersectional approaches, this course examines how gender shapes our views of the environment, agriculture and food. We consider the leaders, scholars, innovators, and activists of these movements; what brought them to their commitments; and how their identities might have shaped their interests, activities and goals. The course asks how we come to see and hear certain individuals and groups while others remain hidden and how these issues of visibility and invisibility influence public opinions and public activism. We will take our own gender analysis skills into our local garden, farm and food systems. We will study relevant Michigan programs and work with the Wildcat Garden. *Staff*

## WGS 287: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## WGS 288: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## WGS 289: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## WGS 360: Feminist Theory

(1 Unit)
Prerequisite: WGS 106 or WGS 116 or permission of instructor.
Explores twentieth-century feminist thought from the United States and Great Britain with some attention to other influences. Grounds feminist theory within the grassroots women's movement, a social, cultural and political movement for change. Tracing the influence of feminism in the academy, the course surveys not only the critical and analytical foundations of the field of women's studies but also the impact of women and gender-centered scholarship on the traditional disciplines. The challenges to feminist theory raised by U.S. women of color, working-class women, lesbians and other women who have experienced multiple oppressions are explored along with the women's examinations of the intersections of sexism and racism, classism, homophobia and other systems of power. *Staff*

## WGS 364: Black & Queer Feminist Theory

(1 Unit)
Prerequisite: WGS 111 or permission of instructor
Black feminism-queer feminism examines two of the theoretical positions that have most challenged mainstream feminist theory. It will cover early writings from Black women up through the decades of women's rights, abolitionism, civil rights, Black liberation and feminist struggles. Similarly, the course will trace the emergence of queer theory, searching for its historical roots and studying its contemporary expression. Final research projects will focus on the diverse forms Black and queer feminists are using to express and communicate their theories today. *Staff*

## WGS 387: Selected Topics

(1/4 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## WGS 388: Selected Topics

(1/2 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## WGS 389: Selected Topics

(1 Unit)
An examination of subjects or areas not included in other courses. *Staff.*

## WGS 391: Internship

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

## WGS 392: Internship

(1 Unit)
Offered on a credit/no credit basis. *Staff.*

## WGS 398: Practicum

(1/2 Unit)
Offered on a credit/no credit basis. *Staff.*

## WGS 401: Seminar

(1/2 Unit)
*Staff.*

## WGS 402: Seminar

(1 Unit)
*Staff.*

## WGS 411: Directed Study

(1/2 Unit)
Directed studies generally are reserved for those students who have schedule conflicts between two majors. They are also available for students pursuing honors theses. In specific cases, students may request directed studies that cover topics beyond the scope of the current curriculum. These students are expected to present their proposed plan of study to the instructor for approval well in advance of registration. *Staff*

## WGS 412: Directed Study

(1 Unit)
Directed studies generally are reserved for those students who have schedule conflicts between two majors. They are also available for students pursuing honors theses. In specific cases, students may request directed studies that cover

topics beyond the scope of the current curriculum. These students are expected to present their proposed plan of study to the instructor for approval well in advance of registration. *Staff*

# Admission to Albion

# Application for First-Year Admission

Admission to Albion College is selective and based on a review of the applicant's academic credentials, personal qualifications, and potential for success at the College. Albion admits students without regard to race, ethnicity, creed or national origin.

The Admission Committee reviews applications on an individual basis, paying particular attention to the unique qualities each candidate possesses. The committee considers the following factors in evaluating an applicant's credentials: rigor of curriculum pursued, grades, co-curricular involvement in high school, community and religious activities, letters of recommendation received, and results of the ACT or SAT college admission tests. The Curriculum and Resource Committee approved the extension of the test-optional policy in admissions through 2023.

Candidates for admission are expected to graduate from an accredited high school or preparatory school and have at least 15 units of academic credit in the following subjects: English, mathematics, social science, science and foreign language. Albion College also welcomes students who have been home schooled or who have earned a General Education Diploma (GED). In both cases, students should contact the director of admission to develop a process to review non-traditional academic experiences and competencies.

Students may submit an application for admission at any time after August 1. Normally, however, students apply after October of their senior year in high school. In order to receive equal consideration for admission and financial aid, **students should apply and have all required credentials on file by February 15 of their senior year.**

Students who submit an online application are not charged a fee. Albion has its own application and also accepts the Common Application.

Applicants seeking fall admission must pay a $350 enrollment deposit to the College postmarked no later than May 1 to secure their place in the fall class.

Applicants seeking spring admission should submit their $350 deposit before January 10.

# Early Action

Albion welcomes students to apply early to secure a place in the fall class, and to ensure full consideration for academic and special talent scholarships. Students who apply by November 1 or December 1 will be notified of an admission decision by January 15. The early action process is non-binding. All students who apply after December 1 will be considered on a rolling basis, and will be notified of an admission decision beginning February 1 until the class is filled.

# Entrance Tests

Standardized entrance tests (ACT or SAT) are required. High school students should sit for the ACT or SAT exam no later than February of their senior year. Albion College's code number is 1007 for the SAT and 1956 for the ACT. Information about the SAT may be obtained from the College Board at www.collegeboard.org. Information about the ACT may be obtained at www.act.org.

# Campus Visit

A visit to the campus and a personal interview are highly recommended. As a service to campus visitors, guided tours of the campus are provided. The admission staff will also arrange visits with faculty members or with specific academic departments.

The Admission Office is open on weekdays from 8:00 a.m. until 5:00 p.m. It is also open on select Saturdays during the academic year.

Specific information pertaining to the curriculum, the faculty or admission to Albion College may be obtained from:

Albion College
Office of Admission
611 E. Porter St.
Albion, Michigan 49224
Telephone: 800/858-6770
E-mail: admission@albion.edu
Web: http://www.albion.edu

# Advanced Placement and CLEP

Albion College is a participant in the Advanced Placement Program of the College Entrance Examination Board (CEEB). Under this program, a high school student who earns a grade of 4 or 5 on an Advanced Placement Examination automatically receives college credit and may receive advanced placement in the area of his or her proficiency.

Some College departments also participate in the College-Level Subject Examination Program (CLEP) of CEEB. Albion College permits students to obtain a maximum of eight units of credit toward the bachelor of arts, and to fulfill core and/or major requirements through CLEP. **Students should contact the Registrar's Office for information on which departments accept CLEP credit.**

**Maximum Credit Available Through Examination—**No more than eight units of credit can be obtained through any combination of locally designed departmental examinations and the College-Level Examination Program. No more than 12 units of credit can be obtained through any combination of the Advanced Placement Examination, locally designed departmental examinations, and the College-Level Examination Program.

**Immediate Sophomore Standing—**An entering student who presents six or more units obtained through the Advanced Placement Examination, locally designed departmental examinations, and/or the College-Level Examination Program will obtain immediate sophomore standing.

# International Baccalaureate and Cambridge A-Level Exams

**International Baccalaureate—**The College recognizes the strength and rigor of the International Baccalaureate Program. Students will receive one unit (four semester hours) of credit for IB courses/tests taken at the highest level with a score of 5 or more. International Baccalaureate credit does NOT fulfill mode or category requirements; it fulfills divisional core requirements only. Application of International Baccalaureate credit toward major, minor, and concentration requirements is stated in the Academic Catalog.

**Cambridge A-Level Exams --** Students who have taken the General Certificate of Education advanced-level examination (GCE A-level) will receive 1 unit (four semester hours) of credit for each passing grade (A, B, or C) on any of the exams listed below. Students who have received a passing grade (A, B, or C) on other exams may petition to receive credit. To determine placement, students should consult with the appropriate department. Cambridge A-Level General Certificate of Education credit does NOT fulfill mode or category requirements; it fulfills divisional core requirements only. Application of A- Level credit toward major, minor, and concentration requirements is stated in the Academic Catalog.

# Special Admissions

## Transfer Students

Each year Albion accepts students who have attended other colleges or universities. It is recommended that candidates possess at least a 3.0 grade point average for consideration. It is expected that the applicant will be in good academic and social standing at the college last attended and that the previous college record has been strong enough to compare favorably with students already in attendance at Albion. Students are responsible for submitting, with their application, official transcripts from all institutions previously attended, along with an academic and social status supplement completed by the appropriate official from each institution previously attended.

Students with an official transcript marked "MACRAO approved" for an associate of arts (A.A.) degree from a Michigan community or junior college are exempt from taking the First-Year Seminar and the Modes of Inquiry requirement, and they may be admitted at the junior level. However, the following graduation requirements must be met: the category requirements and the writing competence requirement.

A maximum of 20 units (80 semester credit hours) may be transferred from regionally accredited colleges and universities. Students must complete no less than the last 12 units (48 semester hours) in residence at Albion. These students must also complete all degree requirements including the category requirements and the writing proficiency requirement.

For more specific details regarding Albion's unit system and required course grades, refer to the Academic Regulations section of this catalog.

## International Students

To be considered for admission to Albion, an international student must complete the admission procedures including the following:

- Common Application for International Students.
- Statement of Financial Support for International Students with supporting documents, i.e., bank statements, income/salary statements of parents or sponsors from their employers, and a financial support letter.
- Personal statement/essay (one page minimum).
- Original or certified copies of all academic records, secondary school transcripts, and college/university transcripts, translated into English and listing individual courses including types, number, and grades received. A minimum of at least three years of records will be required for students applying from four-year secondary institutions and a minimum of two years for students applying from three-year secondary institutions. In most cases, transfer students from colleges/universities outside the United States seeking admission to Albion College will require an external evaluation by World Education Services (WES) and Educational Credential Evaluators (ECE) for transfer of college credits. Collegiate credits can be transferred at any time after the semester ends but will be evaluated on a course-by-course basis by the Albion College registrar.

- Official scores of TOEFL, IELTS, ACT, SAT or ELS course 112 completion sent directly to Albion College from educational testing services. Albion College will also allow certified copies stamped by a school counselor or administrator.
- Two letters of reference from the guidance counselor or headmaster, English teacher (or teacher of choice for English-speaking nations) or a community member from a club or service organization with which the student is affiliated.

To ensure enough time to obtain a student visa, we advise students to complete the application package and send it to Albion College by **February 1** for fall admission, **October 1** for spring admission, or **December 1** for early action. Late applications will be reviewed if space allows. Once Albion College has received the application materials, an admission decision is made within four weeks.

**Financial Aid—**International students should consider an Albion education an investment the student, family and sponsors are willing to make. Few colleges and universities in the United States provide financial support to international students. International students often receive scholarships to Albion College, although our policies limit the maximum award for international students to 50 percent of the total cost of attendance.

Students who demonstrate the highest academic potential and bring significant co-curricular interests to our campus will receive the greatest consideration for these awards. In awarding scholarships, Albion College also considers an applicant's financial need upon review of the application, as well as other requirements.

Notification of a scholarship is made at the time of admission, and will be noted in the acceptance letter.

For further information about international student admission requirements, please contact:

Office of Admission
Albion College
c/o International Student Admission
611 E. Porter St.
Albion, MI 49224
U.S.A.

# Other Candidates

**Veterans—**Veterans returning from military service and other eligible military personnel are admitted to Albion College under the training provisions established by the Veterans Administration. The College may allow credit for military service activities which have educational content to students who present acceptable military records. Such credentials should be submitted as part of the admission materials. Details about veteran's benefits under the Post-9/11 Veterans Education Assistance Act of 2008 are available online.

**ConApp—**Albion College is a participating college in the United States Army Concurrent Application Program (ConApp) and welcomes applications from prospective students who wish to continue their education after active duty military service. Interested students should contact the Albion College Admissions Office or their Army recruiter for information on the ConApp program and related veteran's benefits for higher education. Albion guarantees admission to qualified ConApp applicants after military service.

**Auditors—**A non-degree student may enroll as an official auditor. This obligates a student to attend classes and complete course requirements (papers, laboratory assignments, tests, and a final examination). The course appears on the transcript and the grade is posted, but no degree credit is earned.

**Guest Students—**To be admitted as a guest student at Albion College students must complete the Michigan Undergraduate Guest Application. All guest students must be in good academic standing at their home institution.

Guest students assume responsibility for determining whether the course they take at Albion will apply to their program of study.

# Tuition and Fees

**2021-2022Academic Year**

The tuition and fees for the 2021-2022 academic year were set by the Board of Trustees at the January 2021 meeting. Outlined below are those fees.

| | Fall 2021 | Spring 2020 | Total |
|---|---|---|---|
| Tuition | $ 26,285.00 | $ 26,285.00 | $ 52,570.00 |
| Housing** | $3,040.00 | $3,040.00 | $6,080.00 |
| Board | $3,150.00 | $3,150.00 | $6,300.00 |
| Activity Fee | $260.00 | $260.00 | $520.00 |
| Total | $ 32,735.00 | $ 32,735.00 | $ 65,470.00 |
| Matriculation | $185.00 | 0.00 | $185.00 |

**The housing charge is for a regular double occupancy room. See below for other housing charges.

**Matriculation Fee/Readmission Fee:** A one-time matriculation fee of $185.00 is paid by all matriculating students for administrative and processing costs. Readmitted students are also required to pay a $75.00 readmission fee. Both are non-refundable.

| | |
|---|---|
| Readmittance Fee | 75.00 |
| General Deposit | 350.00 |

Payable upon receiving notice of admission to assure a place in the enrolling class, $200.00 will be credited to the first semester general fees for matriculating students. For students accepted for the first semester, entrance deposits are required by May 1. For students accepted for the second semester, entrance deposits are required by November 15. Entering students who cancel enrollment after May 1 and prior to August 1 for the first semester and after November 15 and prior to December 15 for second semester will receive a partial refund of $50.00. Partial refunds will not be made after August 1 and December 15 for the respective semesters. See Refunds section for details regarding return of the general deposit to students who have already been enrolled.

**Textbooks and Supplies:** There are no standard fees for textbooks and supplies. However, every student must plan to purchase such items in addition to the expenses listed above. Books and supplies range from $900.00 to $1,000.00 per year for the average Albion student.

Summer 2021 Tuition and Fees

**Other Educational Fees** (per semester, where applicable ) **- 2021-2022**

| | |
|---|---|
| Tuition: Each 1/4 unit (below 3 units or above 4.5 units) | $2090.00 |

| | |
|---|---|
| Late Enrollment Fee: First Day | $30.00 |
| Each additional day | $15.00 |
| Tuition for Auditors (per 1/4 unit) | $540.00 |
| Equestrian - Group Wellness Course | $140.00 |
| Off Campus Study Administration Fee (per semester) | 1,500.00 |
| Non-college Housing Fee (per semester) | 810.00 |

**Music Fees**

**Private Music Lesson Fees**

| | |
|---|---|
| Music Lesson fees - 1/4 unit (1/2 hour lesson per week) | $270.00 |
| Music Lesson fees - 1/2 unit (1 hour lesson per week) | $550.00 |

Students declaring a music major (and demonstrating this intention by being enrolled in the music classes appropriate to the music major curriculum) will receive at no additional cost up to 1/2 unit of private lessons per semester. All other students must pay the full applied music fee for lessons.

**Refunds:** Students who drop private music lessons after the drop/add period will receive no refund. Students dropping lessons during the drop/add period will be charged $50.00 per scheduled lesson.

**Board Fees:** (2 semesters unless otherwise indicated) **-** 2021-2022

**Residential Block Meal Plans**

Enjoy carry-out, dine-in and late-night dining at Baldwin Cafe, The Eat Shop, Read Between the Grinds and The Dub Box (take out is available in lower Baldwin provided you have an Albion College approved take out container).

| | |
|---|---|
| 15 Block Board Plan - includes 15 meals (card swipes) per week; $100.00 Dining Dollars ($50.00 per semester), and 4 Guest Passes | $6,300.00 |
| 18 Block Board Plan - includes 18 meals (card swipes) per week; $150.00 Dining Dollars ($75.00 per semester), and 4 Guest Passes | $6,390.00 |
| 21 Block Board Plan - includes 21 meals (card swipes) per week; $300.00 Dining Dollars ($150.00 per semester), and 4 Guest Passes | $6,550.00 |
| Commuter - 75 meals (card swipes) per semester | $2,110.00 |
| Commuter Purple - 100 meals (card swipes) per semester | $2,680.00 |
| Commuter Gold - 125 meals (card swipes) per semester | $3,270.00 |
| Weekender Meal Plan - 5 meals (card swipes) per weekend | $1,100.00 |

Students who feel they are in need of any special accommodations with the Board Plan should contact the Office of Community Living.

**Deadline for changing a meal plan selection with the Office of Community Living is 5:00 pm on the tenth class day of each semester.**

***The Fees below are **Housing Fees** only and do not include the cost of the Meal Plan. The Meal Plan is an additional cost.

***All Housing Fees are for Regular Double Rooms unless noted.

**Wesley Hall**

| | |
|---|---|
| Wesley Hall (Double Room w/roommate) | $6,080.00 |
| Wesley Hall (Single Room) | $7,860.00 |
| Wesley Hall (Double Single - double room used as single occupancy) | $8,370.00 |

**Seaton Hall**

| | |
|---|---|
| Seaton Hall (Double Room w/roommate) | $6,080.00 |
| Seaton Hall (Single Room) | $7,860.00 |
| Seaton Hall (Double Single - double room used as single occupancy) | $8,370.00 |

**Whitehouse Hall**

| | |
|---|---|
| Whitehouse Hall (Double Room w/roommate) | $6,430.00 |
| Whitehouse Hall (Single Room) | $7,880.00 |
| Whitehouse Hall (Double Single - double room used as single occupancy) | $8,730.00 |

**Mitchell Towers**

| | |
|---|---|
| Mitchell Towers (Double Room w/ roommate) | $6,430.00 |
| Mitchell Towers (Single Room) | $7,880.00 |
| Mitchell Towers (Double Single - double room used as single occupancy) | $8,730.00 |

**Fiske House**

| | |
|---|---|
| Fiske House (Double Room w/roommate) | $6,080.00 |
| Fiske House (Single Room) | $7,860.00 |
| Fiske House (Double Single - double room used as single occupancy) | $8,370.00 |
| Fiske House (Triple Room) | $5,620.00 |

**Ingham Hall**

| | |
|---|---|
| Ingham Hall (Double Room w/roommate) | $6,430.00 |

| | |
|---|---|
| Ingham Hall (Single Room) | $7,880.00 |
| Ingham Hall (Double Single - double room used as single occupancy) | $8,730.00 |

Students who do not live in the Residence Halls (Fraternity Houses, Apartments, Dean Hall and Commuters) are not required to purchase a College Meal Plan. However, residents of these buildings may purchase a meal plan including the Weekender and Commuter meal plans.

**Fraternities**

| | |
|---|---|
| Double Room w/roommate | $7,220.00 |
| Double Room w/single occupancy | $9,520.00 |
| Power Suite | $7,990.00 |

**Dean Hall**

| | |
|---|---|
| Dean Hall (Double Room w/roommate) | 7,120.00 |
| Dean Hall (Single Room) | 8,870.00 |
| Dean Hall (Double Single - double room used as single occupancy) | 9,390.00 |

**Burns Street Apartments**

| | |
|---|---|
| Burns St Apts (Double Room w/roommate) | $7,180.00 |
| Burns St Apts (Double Single - double room used as single occupancy) | $9,500.00 |
| Burns St Apts (Efficiency w/roommate) | $6,720.00 |
| Burns St Apts (Efficiency Efficiency as Single Occupancy) | $9,500.00 |
| Burns St Apts (Family Living per month) | $1,170.00 |

**Briton Apartments**

| | |
|---|---|
| Briton Apts (Double Room) | $7,830.00 |
| Briton Apts (Double Single - double room used as single occupancy) | $10,130.00 |

**314 Burr Oak Street**

| | |
|---|---|
| 314 Burr Oak Street (Double Room w/roommate) | $8,250.00 |
| 314 Burr Oak Street (Single Room) | $9,980.00 |
| 314 Burr Oak Street (Double Single - double room used as single occupancy) | $10,970.00 |

| | |
|---|---|
| 314 Burr Oak Street (Double Room used as triple occupancy) | $7,360.00 |

**507 Erie Street Apartment**

| | |
|---|---|
| 507 Erie Street (Double Room) | $8,250.00 |
| 507 Erie Street (Single) | $9,980.00 |
| 507 Erie Street (Double-Single - double room used as single occupancy) | $10,970.00 |

**416 Erie Street Apartments**

| | |
|---|---|
| 416 Erie Street (Double Room w/roommate) | $8,250.00 |
| 416 Erie Street (Double Single - double room used as single occupancy) | $10,970.00 |

**1101 Erie Street**

| | |
|---|---|
| 1101 Erie Street (Double Room) | $8,250.00 |
| 1101 Erie Street (Single) | $9,980.00 |
| 1101 Erie Street (Double-Single - double room used as single occupancy) | $10,970.00 |

**Mae Harrison Karro Residential Village (The Mae)**

| | |
|---|---|
| The Mae (Double Room w/roommate) | $8,780.00 |
| The Mae (Single Room) | $10,590.00 |
| The Mae (Double Single - double room used as single occupancy) | $11,100.00 |

**810 Michigan Avenue**

| | |
|---|---|
| 810 Michigan Avenue (Double Room w/roommate) | $8,250.00 |
| 810 Michigan Avenue(Double Single - double room used as single occupancy) | $10,970.00 |

**Munger House**

| | |
|---|---|
| Munger House (Double Room w/roommate) | $8,250.00 |
| Munger House (Double Single - double room used as single occupancy) | $10,970.00 |

**Munger Apartments**

| | |
|---|---|
| Munger Apartments (Double Room w/roommate) | $8,780.00 |
| Munger Apartments (Single) | $10,590.00 |
| Munger Apartments (Double Single - double room used as single occupancy) | $11,100.00 |

**1000 Porter Street**

| | |
|---|---|
| 1000 Porter Street (Double Room w/roomate) | $8,250.00 |
| 1000 Porter Street(Single) | $9,980.00 |
| 1000 Porter Street (Double-Single - double room used as single occupancy) | $10,970.00 |

**1112 Porter Street**

| | |
|---|---|
| 1112 Porter Street (Double Room w/roommate) | $7,830.00 |
| 1112 Porter Street (Single Room) | $8,800.00 |
| 1112 Porter Street (Double Single - double room used as single occupancy) | $10,130.00 |

**Special Fees**

| | |
|---|---|
| Albion 1Card ID replacement | $5.00 |
| Automobile Registration (per Year)(All Students) | $300.00 |
| Replacement of lost room key | $90.00 |
| Replacement of lost Mail Box key (1st time) | $7.00 |
| Replacement of lost Mail Box key (2nd time) | $15.00 |
| Diploma replacement with cover | $40.00 |
| Special student admission (non-refundable) | $10.00 |
| Returned Check Fee | $9.00 |

# Financial Aid

Albion College offers need-based financial aid in the form of grants, scholarships, loans and student employment. Sources of funds include Albion College scholarships, grants and work; private sources; and State of Michigan and federal grant, loan and work programs administered by the College. To apply for need-based financial aid, students must complete the Free Application for Federal Student Aid (FAFSA). The FAFSA may be completed online at www.fafsa.gov. The Albion College Student Financial Services Office will develop a financial aid package based on the FAFSA information. The package may include a combination of grants, scholarships, loans and work. Students

have the option of accepting all or part of the aid awarded. Albion College also offers a number of academic scholarships to incoming students. Students who qualify for an academic scholarship receive notification from the Admission Office.

While we do everything we can to assist students with financial need, it is important to remember that, at Albion, we believe the primary responsibility for financing your education lies with you and your family. In awarding need-based aid, the College requires that each student and his/her parent(s) contribute funds toward the cost of the education.

Information about loans, scholarships and work opportunities may be secured by contacting Albion's Student Financial Services Office. Entering first-year students applying for financial aid are urged to make their requests by filing the FAFSA by February 15 of their senior year. The deadline for the State of Michigan scholarship/grant program is March 1. For maximum consideration, Albion academic scholarship applications must be received by February 15.

# Need-Based Aid Renewal

You must reapply annually for need-based financial aid. Based on available funding, aid usually continues at the same level each year, unless there is a change in your financial situation.

# Satisfactory Progress Policy

The Higher Education Act of 1965, as amended by Congress in 1980 and reauthorized in 1992, mandates that institutions of higher education maintain minimum standards of "satisfactory progress" in order for students to receive financial aid. Albion College makes these standards applicable to all need-based institutional awards, Federal Pell Grants, federal campus-based programs, Federal Direct Loans, Federal PLUS Loans and State of Michigan awards in order to maintain a consistent policy for all students receiving assistance. To satisfy satisfactory progress requirements, a student must maintain a minimum G.P.A. each semester, complete a required number of units each year and complete degree requirements within a determined number of semesters. An Albion College student is eligible for the equivalent of eight full-time semesters of financial aid. Students enrolled in the teacher certification program or the Bachelor of Fine Arts (B.F.A.) program may be required to attend one additional semester. These students will be given nine semesters of aid in which to receive their degree/certificates. Students who do not complete their degree in eight semesters (or nine for teacher certification or B.F.A.) may not be eligible for additional financial aid.

A full-time student is one who is enrolled for at least 3.0 units each semester. A half-time student is one who is enrolled for at least 1.5 units per semester. Students carrying fewer than 1.5 units will be considered a quarter-time student. Semesters in which the student is enrolled exclusively for a one-unit internship, or summer semesters in which the student is enrolled for one unit, do not count toward the maximum semester limitation as indicated above. Other part-time semesters will be equated to full-time semesters. Students planning to enroll part-time should notify the Student Financial Services Office.

All full-time semesters for which the student is enrolled in the College are counted in the eight-semester limitation (nine semesters for teacher certification or B.F.A.) even if no financial aid was received. Semesters in which the student enrolled and attended any classes will count in semesters attended, including semesters in which a student withdraws or takes a leave of absence.

Grade point average (G.P.A.) and units completed are reviewed for satisfactory academic progress at the end of the spring semester. Students must maintain the following cumulative average and units completed:

1.00 with a minimum of 3 units completed at the end of the first semester at Albion College;

1.62 with a minimum of 6 units completed at the end of the second semester at Albion;

1.75 with a minimum of 9 units completed at the end of the third semester at Albion;

1.81 with a minimum of 13 units completed at the end of the fourth semester at Albion;

1.90 with a minimum of 17 units completed at the end of the fifth semester at Albion;

2.00 with a minimum of 21 units completed at the end of the sixth semester at Albion;

2.00 with a minimum of 25 units completed at the end of the seventh semester at Albion;

In addition, regardless of the cumulative grade point average, a student who fails to obtain a minimum 2.0 G.P.A. for three consecutive semesters is not considered to be making satisfactory academic progress for aid renewal.

**Transfer Students**--Class standing of transfer students will be considered according to units transferred in. For example, a student who is deemed to have first-semester sophomore class standing upon entrance will be eligible for six semesters of Albion College financial aid.

**Notification**--The Student Financial Services Office will notify any student qualifying for financial assistance who does not meet minimum satisfactory progress and is being terminated from aid. Following the spring semester, notices will be sent electronically to the student's Albion e-mail account and any other e-mail on record with the registrar, and such notices will be considered delivered.

**Regaining Eligibility**--A student who has insufficient units to qualify for aid may be considered eligible for aid only when enough units, including incomplete courses, have been completed to make up the unit shortage. Unit credit may be transferred in, but G.P.A. will be affected only by courses taken at Albion College. The academic year will be considered to commence with the first day of classes of the fall semester and continue to the first day of classes the following fall, thus allowing the possibility of reinstatement of aid eligibility over the summer term. If a student had mitigating circumstances that prohibited him/her from meeting the standards, the student may submit an appeal. Appeals must be made in writing to the Student Financial Services Office, and they will be reviewed by the Appeals Committee prior to the start of the semester in which reinstatement of financial aid eligibility is requested. Examples of mitigating circumstances include: illness, change of major, unexpected hardships and death in the immediate family.

**Academic Withdrawal**--See the Academic Regulations section of this catalog for academic status and withdrawal information.

# Albion College Academic Scholarship Renewal

Academic scholarships are renewable annually provided students maintain the required yearly grade-point average and are in good personal standing with the College.

Scholarship recipients are expected to maintain superior academic performance while at Albion College. To renew a Distinguished Albion Scholar award, a Trustee Scholarship or a Presidential Scholarship, a student must maintain an annual grade point average of 3.00. To renew a Webster Scholarship or a Briton Award, a student must maintain an annual grade point average of 2.50. Recipients of a Heritage Award must meet the minimum satisfactory academic progress standards outlined above.

Grade point averages and units earned are reviewed at the end of the academic year by the Student Financial Services Office. A student's first year of college is often the most challenging. Therefore, students are encouraged to seek the advice of their faculty adviser while making decisions regarding their class schedule. Eligibility to retain an academic award will require the annual G.P.A. or a written plan of action from the faculty adviser regarding the issues surrounding a student's G.P.A.

# Student Employment

Campus employment is available to help students meet expenses. The Federal Work-Study program is available for students who show financial need, based on analysis of the FAFSA. In addition to on-campus Work-Study positions, there are positions available off-campus in the community of Albion that are funded through the Federal Work-Study program. Students who are not eligible for the Federal Work-Study program may receive an Albion work award. Earnings from student employment are paid directly to the student by payroll check each month; the amount earned is not credited to the student's account.

The Student Employment Office has a listing of on- and off-campus jobs that are available for everyone (Work-Study and non-Work-Study students). Jobs are also listed online at www.albion.edu/studentemployment. This listing includes job description, qualifications needed and rate of pay.

# International Scholarships and Fellowships

Information on prestigious national and international scholarships and fellowships is in the Academic Programs section under Academic Honors and Awards.

# Student Life

As a residential college, Albion is concerned with the growth and development of the whole student in a number of interrelated realms: intellectual, personal, social, spiritual, emotional, physical and vocational. The various programs described below assist students' education outside the classroom. Personal growth is encouraged and supported through programs that practice community development, healthful living and the ability to interact with people from different cultures and backgrounds. The vice president for student development is responsible for providing leadership to most of the programs and services below, all of which support the academic mission of the College and enhance the full educational experience.

# Residential Living

Albion is a residential college and expects all of its students to live and board within the College residence system. As such, residential life provides opportunities for students to integrate the academic mission of the College with the out-of-class experience. The Office of Residential Life offers numerous programs and activities to meet students' educational and social needs.

# Student Activities

An Albion education involves more than time in the classroom and library. Students are encouraged to take advantage of the wide range of opportunities available to them, including approximately 100 clubs and organizations, student government, publications, Greek organizations and athletics. The Office of Campus Programs and Organizations (CPO), located in the Kellogg Center, serves as a resource center for students, faculty and student groups.

# Varsity Sports

Albion is a charter member of the Michigan Intercollegiate Athletic Association (MIAA), founded in 1888. It is the oldest collegiate athletic conference in the United States. For more information on intercollegiate sports for men and women, visit gobrits.com.

# The First-Year Experience

Through the William Atwell Brown, Jr. and Mary Brown Vacin First-Year Experience, all first-year students enroll in a First-Year Seminar. This seminar is an important building block for Albion community development. With the First-Year Seminar as a basis, first-year students participate in structured experiences for personal, academic and professional growth that are facilitated by Student Development staff, faculty and student mentors.

# Office of the Chaplain

As an institution founded by and related to the United Methodist Church, Albion College celebrates pluralism and spiritual development. The Office of the Chaplain embodies this commitment as it strives to create a welcoming and affirming environment, and prepare graduates to enter a diverse global workplace. "Spirituality" is understood in the broadest terms as a basic characteristic of every human, and therefore the office is here to serve all students.

# Intercultural Affairs

In support of Albion's commitment to an inclusive, pluralistic and equitable community for learning, the Office of Intercultural Affairs works cooperatively with students, faculty, staff and the Albion community to heighten awareness of an appreciation for cultural, ethnic and racial diversity. Emphasis is placed on the development and implementation of educational programs and activities that assist in the transition and retention of under-represented students. These programs include an orientation and mentoring program.

# Counseling Services

The Office of Counseling Services' mission is to help students solve problems and acquire the skills they need to reach their academic and life goals. Counseling Services assists students when emotional, relationship or psychological issues negatively impact their ability to make the most of their educational experiences at Albion.

# Anna Howard Shaw Women's Center

Founded in 1985, the Anna Howard Shaw Women's Center coordinates programs focused on women for the Albion community. This includes organizing activities that raise awareness of women's issues, support women in their quests for empowerment and equality and build a collaborative community in which women's voices are heard and honored. For Women's History Month in March each year, the Women's Center, in coordination with the Women's and Gender Studies Committee, provides programming to honor Dr. Shaw's life and work by highlighting women's lives, interests and passions.

# Student Health Services Navigator

The focus of the Student Health Services Navigator is to take a holistic approach in supporting the wellness needs of Albion College students. This may include sharing health promotion and disease prevention information throughout the academic year. The Student Health Services Navigator will assist students with insurance issues, referrals, coordination of ongoing care, and navigating health care services through the College partnership with the Oaklawn Family Practice and Express Care - Albion.

# Campus Safety

The Department of Campus Safety is staffed with professional officers. The main objective of Campus Safety is to provide the campus community with a safe environment. The Department of Campus Safety is available 24 hours a day, 365 days a year, to respond to student, faculty and staff needs.
Student Regulations and Basic Principles of Responsibility:
Attendance at Albion College is a privilege, and students are expected to conduct themselves in a responsible manner that reflects the ideals and educational aims of the College. Where student responsibility does not reflect this expectation, concern will be expressed and suitable action taken which may include suspension or permanent dismissal from the College.
To establish high standards and to encourage greater understanding and responsibility, College expectations, regulations and practices, including customs and traditions, are contained in the Student Handbook which is made available online to students each fall. For more information, see "Policies and Expectations" in the *Student Handbook.*

# Liability Disclaimer

Albion College shall not be liable for any injuries to or property damages suffered by any student regardless of cause. This disclaimer of liability shall apply to, but not by way of limitation, the following:

- Any injury or damage incurred on property owned by or under the control of the College, or its subsidiaries, such as classrooms, residence halls or other housing, any other structures, all common areas and grounds, and vehicles;
- Any injury or damage incurred as a participant, spectator or otherwise in any intramural or intercollegiate or other event or contest, athletic or otherwise, or while in transit thereto or therefrom;
- Any injury or damage suffered while engaged in or attending a classroom or related activity, whether required or elective, and regardless of cause;
- Any injury or damage suffered by reason of theft, fire, damage by the elements or by other cause;
- Any injury or damage suffered by reason of any act or omission of any College trustee, officer, member of the faculty or staff, employee, contractor or student.

By applying for admission or readmission to the College, or by continuing their enrollment with the College for a subsequent semester, students accept the foregoing disclaimer and agree to be bound thereby.

# Insurance of Personal Belongings

The College does not insure personal effects of students. Therefore, it is recommended that students insure their belongings either through their parents' homeowner policy or a separate rental insurance policy.

# The Albion Campus

In recent years, Albion's main campus has expanded so that it now includes more than 30 major buildings. The College is located in the city of Albion, a community of 9,000 founded in the 1830s along the banks of the scenic Kalamazoo River. The city is located 90 miles west of Detroit and 175 miles east of Chicago on Interstate 94.

The south boundary of the College is bordered by the Kalamazoo River's east branch. Interstate 94 business route borders the campus on the north, and the downtown shopping area is only a few blocks away.

Albion's original campus is today known as the Quadrangle, and from it have radiated the many new buildings erected during the past 30 years.

Experience more of the Albion Campus by taking a virtual tour.

**Admission Office** is located at the Bonta Admission Center, 100 N. Hannah St., one block south of Michigan Avenue. The Admission Office is open weekdays, Saturday mornings and by special appointment. The building is named for long-time dean of admissions Frank Bonta, '49.

**Alumni Field** serves Albion's varsity and intramural athletic programs for men and women, as well as the Kinesiology Department. The facility includes Sprankle-Sprandel Stadium, Schmidt-Fraser Football Field, Isaac Track, Joranko Baseball Field, Dempsey Softball Field, a varsity soccer field, varsity tennis courts, practice fields and the Beese-Havens Boathouse.

**Astronomical Observatory**, erected in 1883, houses a large refracting telescope and related equipment. Portions have been remodeled to house the Prentiss M. Brown Honors Program. The building is a State of Michigan registered historical site.

**ATIC (Albion College Technology and Innovation Center)**, located between Olin and Facilities houses the Instructional Technology staff. It is a safe haven for faculty, students and administrative staff to share and explore new ideas regarding pedagogy and course projects. With opportunities for individual and group collaboration, the ATIC promotes a culture of innovation through the creation, sharing and testing of idea(s). Technological components available at the ATIC will evolve with the exploration of new ideas.

**Baldwin Hall Alumni Center**, named for Dr. Charles W. Baldwin, a former College trustee, includes the student dining facilities.

**Bellemont Manor** is the colonial mansion that serves as a conference center, under the supervision of the College's Office of Dining and Hospitality Services. The mansion offers meeting rooms, lodging and dining facilities. Situated on a five-acre site one-half mile from campus, Bellemont Manor was built by Mr. and Mrs. George Dean in 1927-28 and was donated to Albion College in 1962.

**Bobbitt Visual Arts Center**, built in 1965, houses the Department of Art and Art History, and includes the Elsie E. Munro, '26, Art Gallery and one smaller gallery. It is named for long-time visual arts professor Vernon L. Bobbitt. The Center has studios for painting, sculpture, printmaking and other media. An adjacent ceramics facility was built in 1973.

**Dean Hall** is a cooperative residence for women. The facility, built in 1937 and located two blocks west of the campus, provides accommodations on a shared-work basis. The cooperative plan results in lower room and board costs than those of some other residence units.

**Dickie Hall**, a State of Michigan registered historical site, is one of Albion's oldest buildings. Construction began in 1857, although the facility was not completed until 14 years later. In this structure, the famous song "The Sweetheart of Sigma Chi" was written in the early 1900s. The building is named for Dr. Samuel Dickie, president of the College, 1901-1921. Originally housing the College chapel and offices, Dickie Hall is now incorporated into the Kellogg Center.

**Dow Recreation and Wellness Center**, located adjacent to Sprankle-Sprandel Stadium, is devoted to educational and recreational purposes, including individual and group sports activities, physical conditioning, and health and wellness programs. The building's Bernard T. Lomas Fieldhouse contains flexible court space for intramural basketball, volleyball and badminton as well as a 1/9-mile track. Also included in the facility, completed in 1988, are two racquetball courts, training and rehabilitation areas, a classroom, locker rooms and Department of Kinesiology offices. The building was made possible by a gift from the Herbert H. and Grace A. Dow Foundation. The Fieldhouse is named for Dr. Bernard T. Lomas, president of the College, 1970-1983.

Incorporated into the Dow Center is the Dean Aquatic Center, completed in 1978 and named for W. Clark Dean, '21, a long-time Albion College trustee and benefactor. It contains a T-shaped pool, 25 yards by 25 meters. The pool's diving area has 1- and 3-meter diving boards. In 1999 the Ungrodt Tennis Center, containing four indoor tennis courts, was added at the north end of the Lomas Fieldhouse. The facility is named for Paul W. Ungrodt, Jr., '52, a College trustee.

**Ferguson Student, Technology, and Administrative Services Building**, completed in 2002, houses office for the president and four of the College's administrative divisions: academic affairs, finance and administration, institutional advancement and student development. It brings together in one location a broad array of student services, including computing laboratories and technology support. Located on the previous site of the Lottie L. Gassette Memorial Library, the building is named for trustee William C. Ferguson, '52, principal donor for the project

**Fraternity Houses** were rebuilt in 1966 for all campus fraternal organizations by the College. The six fraternities in the complex are Alpha Tau Omega, Delta Sigma Phi, Delta Tau Delta, Sigma Chi, Sigma Nu and Tau Kappa Epsilon.

**Goodrich Chapel** with its stately steeple dominates the Albion campus and serves as a landmark to travelers approaching the city. Chapel offices and classrooms house the Music Department. The building was dedicated in 1958 and is named in honor of Dr. F. S. Goodrich, professor of English Bible and a College chaplain for more than half a century. The sanctuary seats more than 1,400 persons.

**Held Equestrian Center** is a 341-acre facility located a short distance from the main campus. In addition to the Heathman Arena and a modern stable for boarding student-owned horses, it includes an outdoor ring and riding trails set amidst scenic hills and woodlands. Opened in 2004, the center is named for Nancy G. Held, professor and director of the Education Program, emerita.

**Herrick Center** serves the Theatre Department and has the principal college theatre, as well as a smaller studio theatre. It is named for Michigan industrialist Ray W. Herrick. The structure, located on the west edge of Alumni Field, was completed in 1975.

**Kellogg Center**, completed in 1996, serves as a meeting ground for the entire campus community. The facility features lounges, meeting rooms, student organization offices, all campus mailboxes, a grill/snack bar, a convenience store, the College Bookstore and the Office of Campus Programs and Organizations. Gerstacker Commons, a multipurpose area located within Kellogg Center, is available for any campus group planning concerts, lectures, dances or other events. The five-level Kellogg Center adjoins and incorporates historic Dickie Hall. The center is named for Kellogg Co. of Battle Creek, donor of the principal gift for the project.

**Kresge Gymnasium** includes the varsity basketball and volleyball court, along with the Ferguson Dance Studio. Completed in 1925 and totally remodeled in 1988, the building is named in honor of philanthropist Dr. Stanley S. Kresge, '23.

**Kresge Hall** houses classrooms, laboratories and research spaces, primarily for the study of biology and chemistry. Also included is the Ludington Greenhouse. Added to the science complex in 2005, the four-story facility is named for College trustee Bruce A. Kresge, '53, and was made possible, in part, by a $4.5-million grant from the Kresge Foundation.

**Mudd Learning Center/Stockwell Memorial Library** complex houses library collections and services, the Foundation for Undergraduate Research, Scholarship, and Creative Activity (FURSCA), and the Academic Skills Center.

The library contains over 350,000 books and non-print items, rare book collections, the College archives, and a collection of United States government documents which Albion receives as a depository library. The historical archives of the West Michigan Conference of the United Methodist Church are also located in the library. A 2011 renovation of the Stockwell Library's main floor created the Cutler Commons which includes interactive study spaces, a one-stop services area and a café.

Built in 1938, Stockwell Memorial Library is named for Charles F. Stockwell, Albion's first principal, and is a gift of his daughter, Madelon Stockwell Turner, one of Albion's early graduates. The Wendell B. Will Faculty Room is on the second floor of the Stockwell building. The Mudd Learning Center, completed in 1980 and connected to Stockwell Library by an enclosed walkway, is named for Seeley G. Mudd, a physician and medical researcher.

**Norris Center** is a central lecture facility of the four-building science complex and is named for Dr. Louis W. Norris, president of the College, 1960-70. Built in 1969 and completely renovated in 2006, it contains the 340-seat Towsley Lecture Hall, the Mitchell Museum, classrooms and the Dow Analytical Science Laboratory.

**Olin Hall**, completed in 1983, houses the Departments of Communication Studies, Education, and Psychological Science, as well as the Fritz Shurmur Center for Teacher Development. The three-story facility was built and equipped through a $4.5-million gift from the Olin Foundation. Olin Hall contains a large lecture room, classrooms, seminar rooms and research spaces.

**Palenske Hall** is another of the four buildings in Albion College's science complex. Housed in the four-level facility are classrooms, laboratories and research spaces for the study of geology, physics, mathematics and computer science. Built in 1969 and completely renovated in 2005, it is named for Fred C. Palenske.

**Putnam Hall** includes classrooms, laboratories and research spaces, for the study of chemistry, biology and mathematics. Part of the four-building science complex, it was constructed in 1969 and named for Mark E. Putnam, '10. It was completely renovated in 2006.

**Robinson Hall**, renovated in 1992, houses the Departments of Anthropology/Sociology, Economics/Management, History, and Political Science, as well as the Gerald R. Ford Institute for Leadership in Public Policy and Service and the Carl A. Gerstacker Institute for Business and Management. This structure is located on the site of the original Central Building, which was completed in 1843 but subsequently rebuilt with gifts from the late George O. Robinson.

**Sorority Lodges** are maintained by five of the six national sororities on campus. Although members do not live in the lodges, they use them for meetings, special dinners, studying and social functions. Alpha Chi Omega, Alpha Xi Delta, Delta Gamma, Kappa Alpha Theta, and Kappa Delta maintain lodges. The sixth sorority, Alpha Kappa Alpha, uses other meeting spaces on campus.

**Student Residences** include several buildings--Wesley Hall (1925) with its east and west additions (1956), Seaton Hall (1949), Mitchell Towers (1965) and Whitehouse Hall (1963). Wesley Hall was remodeled in 1986, Seaton Hall in 1993 and Mitchell Towers in 2002-03. Seaton Hall is named for Dr. John L. Seaton, president of the College, 1924-1945; Whitehouse Hall for Dr. William W. Whitehouse, president, 1945-1960; and Mitchell Towers for Dr. Peter T. Mitchell, '67, president, 1997-2007. All of Albion's student residences are coeducational with separate sections for men and women. Several homes have been remodeled for special-interest housing, and a limited number of College-owned apartments are also available. The Mae Harrison Karro, '31, Residential Village (2001) houses up to 56 students in apartment-style units. The residence was made possible by a gift from Roy Karro in memory of his wife.

**Vulgamore Hall**, one of the oldest buildings on campus, was erected in 1854. Renovated in 1993, it houses the Departments of English, Modern Languages and Cultures, Philosophy, and Religious Studies. The building was renamed in honor of Dr. Melvin L. Vulgamore, president of the College, 1983-1997.

**Whitehouse Nature Center** is a 144-acre preserve with scenic nature trails. Located on the Kalamazoo River and adjacent to the campus, it is used both for field instruction in the sciences and for quiet walks and observation. An Interpretive Center was built in 1977 to house a classroom, work space and a place for permanent nature displays. The Nature Center is named for Dr. William W. Whitehouse, president of the College, 1945-1960. For more information, visit the Nature Center Web site at: www.albion.edu/naturecenter/.

# About Albion College

An independent, coeducational, residential college founded more than 175 years ago, Albion is committed to the liberal arts tradition. Historically related to the United Methodist Church, the College is dedicated to preserving the values of the past, to serving the needs of the present and to anticipating the goals of the future.

- Albion College's Mission
- The Purpose of the College

- Albion College Diversity Statement

# Albion's People and Programs

Albion's strength is the quality of its faculty and students. The stimulating atmosphere at Albion results in large measure from its faculty, who are dedicated to teaching and scholarship in the liberal arts setting. They have distinguished credentials--95 percent of the faculty have the Ph.D. or the highest appropriate professional degree in their field. Faculty are active in scholarly research and other professional endeavors, and often integrate that work into their teaching. Albion's students are also well qualified. Their combined SAT scores average 1160, and their ACT composite score averages 25; both rank Albion students well above the national average.

The faculty and administrative staff at Albion are deeply committed to the careful education of students and to their development as lifelong learners and as human beings. Accordingly, most classes are small (the average class size is 18), and students have ample opportunity for individual attention. Further, professors spend many hours outside the classroom in individual tutorials, and in academic and career advising.

Through the core requirement, Albion addresses the need for breadth of knowledge and understanding of various modes of inquiry. Through more than 30 departmental, interdepartmental and individually designed majors and minors, students also undertake intensive work in one or more fields within the humanities, natural sciences, social sciences or fine arts. This broad exposure to the liberal arts encourages students to think critically and creatively, to develop their powers of written and spoken expression, and to deepen their understanding of moral and ethical issues.

Beyond these departmental offerings, students have the opportunity to join one of Albion's Institutes and Centers to obtain real-world experience and prepare for a career and to participate in a variety of interdisciplinary study programs. For further exploration and analysis of topics that interest them, they may pursue original research, with support from the Prentiss M. Brown Honors Program and the Foundation for Undergraduate Research, Scholarship, and Creative Activity.

The core curriculum, majors and minors, Institutes, Centers, and the Foundation for Undergraduate Research, Scholarship, and Creative Activity are central to Albion College's vision for a liberal arts education in the twenty-first century. Wise choices from among these educational programs enable students to acquire the special qualifications they need for gaining entry to graduate and professional schools and for entering satisfying careers in many fields.

The College also offers curricular, residential and extracurricular programs that build a sense of community and stress opportunities for developing citizenship. On campus, the network of student organizations encourages the learning of group participation skills. The same organizations have community outreach programs that give Albion students the chance to operate as citizens of the City of Albion. Internships and off-campus programs--many conducted cooperatively with other colleges in the Great Lakes Colleges Association--involve students in regional, national and world citizenship as well.

# Albion's Setting

Albion College is located in a small community, rich in ethnic diversity, that was founded in 1835 at the "forks" of the Kalamazoo River. Located in the heart of the City of Albion, the College has an unusually attractive and well-maintained campus. Around its central quadrangle, numerous well-equipped classroom buildings, libraries and laboratories support learning and teaching. Just beyond, attractive residence halls, housing cooperatives, College-owned apartments and fraternity houses provide a variety of living arrangements for both independent and affiliated students and for small and large groups. A short walk leads to the largest of several well-groomed city parks, to the College's theatre and athletic facilities, and to our scenic 144-acre Whitehouse Nature Center.

An Albion education, then, is a distinctive composite of people and programs. The members of Albion's family, extended in time over more than 175 years and in space all around the globe--its students and alumni, its faculty and

administration, its trustees and friends--have long attested to the value of this special blend. The achievement of Albion's program can be measured in the success of its graduates in living richly fulfilling lives, many of them as leaders in their fields and communities.

# Albion's Accreditation

Albion College is accredited by the Higher Learning Commission (hlcommission.org), a regional accreditation agency recognized by the U.S. Department of Education.

Higher Learning Commission
230 South LaSalle Street, Suite 7-500, Chicago, IL 60604
Telephone: 800/621-7440
Website: www.hlcommission.org

Albion College is also accredited by these nationally recognized groups:

American Chemical Society
1155 16th Street, N.W. Washington, D.C. 20036
Telephone: 800/227-5558
Website: www.acs.org

Commission on Accreditation of Athletic Training Education (CAATE)
2201 Double Creek Drive Suite 5006 Round Rock, TX 78664
Telephone: 512/733-9700
Website: www.caate.net

Council for the Accreditation of Educator Preparation (CAEP)
2010 Massachusetts Avenue, NW, Suite 500
Washington, D.C. 20036
Telephone: 202/223-0077
Website: www.caepnet.org

National Association of Schools of Music
11250 Roger Bacon Drive, Suite 21
Reston, Virginia 20190
Telephone: 703/437-0700
Website: http://nasm.arts-accredit.org/

Any current or prospective student who wishes to review the College's accreditation documents should contact the Office of the Provost.

As part of the accreditation requirements for the Higher Learning Commission, Albion College has established assessment procedures for all academic programs as well as the general education requirement. The procedures are designed to assess the academic achievement of students as a group rather than individually. All students are required to participate in all assessment activities that the College deems necessary.

Albion College is also listed as a United Methodist-affiliated institution by the University Senate of the United Methodist Church, Nashville, Tennessee. More information may be obtained at 615/340-7399 or on the World Wide Web:www.gbhem.org/gbhem/colleg.html.

# Albion College's Mission

# Vision

Albion College is nationally recognized for its academic excellence in the liberal arts tradition, a learning-centered commitment, and a future-oriented perspective. The College is a leader in preparing students to anticipate, solve, and prevent problems in order to improve the human and global condition. The College immerses students in the creation and processing of knowledge, and graduates skilled architects of societal change, active citizens, and future leaders.

# Mission

Albion College prepares students for lives of purpose characterized by meaningful careers and responsible leadership, with local and global impact. We are committed to sustaining a diverse, equitable, inclusive and learner-centered environment where all students feel that they belong. We cultivate critical thinking, creativity, and a love of learning rooted in the liberal arts tradition and academic excellence.

*Approved by the Albion College Board of Trustees, April 2022.*

# Values

As a measure of Albion College's commitment to our students, our public, and the liberal arts tradition, the vision espouses deeply-embedded core values.

We value:

- An intellectually challenging and diverse community of learners, teachers, scholars, and thinkers who share and promote a passion for learning and innovation in teaching and scholarship;
- Our passionate, loyal, and committed alumni;
- Diversity as an expression and affirmation of the human condition and as a source of strength and celebration for all members of the community;
- Fairness, justice, ethical development, and personal responsibility;
- Small classes and personal attention in a residential undergraduate environment where the daily interaction of faculty, staff, and students fosters critical thinking, advances knowledge through collaborative scholarship, respects academic freedom, and inspires lifelong learning;
- Disciplinary and interdisciplinary study;
- Intellectual, personal, social, ethical, and spiritual development within our local and global communities that prepares graduates for productive lives and careers; a breadth and depth of opportunities and experiences; and, the drive to help each other make meaningful and educated contributions to our world;
- Effective stewardship of all our resources—physical, intellectual, environmental, human, and financial; we strive to make decisions that are fiscally responsible;
- Opportunities for collegiality based on shared interests for the common good that lead to rich friendships among faculty, staff, students, alumni, and the greater Albion community.

*Approved by the Albion College Board of Trustees, October 24, 2008.*

# The Purpose of the College

Albion College is committed to liberal education in the arts and sciences. We believe such an education empowers individuals to live lives of constructive purpose and accomplishment, enriched by the confidence and pleasure that come from thinking logically, imaginatively and humanely. In light of this vision we seek to create and maintain, in a

residential setting, a supportive, intellectually stimulating community which exhibits and prizes curiosity, creativity, dissent and diversity.

We believe in the fundamental worth of a broad exposure to intellectual and artistic achievement, to the best that has been thought and said about the world and our place in it. An Albion College education introduces students to classical modes of analysis, interpretation and argument; to unfolding scientific inquiry into the nature of the physical world; to the ways in which contemporary debates derive from and extend an historical but continuing dialogue about enduring questions.

At Albion College we invite students to engage in ongoing conversations centered upon their cultural heritage, yet responsive to global concerns. We believe our students will find their own voices by paying attention to the finest expressions of Western and other intellectual and spiritual traditions. Far from inviting a passive acceptance of such traditions, we encourage students to question and challenge them, to evaluate ethically the social uses they serve and the ends they advocate. In our view, a liberal education is an education in active citizenship and service.

Teaching and learning are central to our mission. This means that while the faculty are productive in scholarly and creative endeavors, their primary commitment is to teaching--specifically, to fostering the intellectual engagement and growth of students. The primary responsibility of students at Albion College is to develop mastery in the methods by which knowledge is acquired, critically evaluated, and appropriately applied. We believe such an emphasis prepares students for a lifetime of learning and a multiplicity of possible careers by developing their broad reasoning, writing and speaking abilities. While the classroom is at the heart of our educational mission, we believe that the entire College community should share in the learning experiences found in our residential setting and through involvement in out-of-classroom opportunities and experiences, including those in the City of Albion.

In recruiting new members to the College community, we seek men and women of intellectual promise from various racial, class, ethnic and geographic backgrounds, whose perspectives can contribute to a process of mutual education within and outside the curriculum. This aim can best be achieved in an environment where individuals value differences and enter into constructive dialogue toward common goals. By pursuing our educational mission, we believe all members of the Albion community will grow in the capacity to work, live and serve effectively with others.

*Approved by the Albion College Board of Trustees, October 30, 1993.*

# Albion College Diversity Statement

A liberal arts education, by definition, should liberate minds. This process is enhanced in a community that is committed to educational equity, diversity and unrestricted inquiry. We seek therefore to foster an environment of mutual respect, acceptance, appreciation and caring for all members of our community. To this end, Albion College condemns all forms of discrimination and harassment, while reaffirming our commitment to academic free speech. We also commit ourselves to the recruitment and retention of both women and minority faculty, staff and students, the integration of cultural diversity in the curriculum, and the development of a truly inclusive multicultural campus environment.

*Approved by the Albion College Faculty and the Executive Committee of the Board of Trustees, 1991-92.*

# Albion's History

The College has a pioneering heritage, originally serving the educational needs of settlers' children and Indians alike. Albion also is one of the earliest Midwest schools to introduce coeducation.

Thanks to the efforts of Methodists who were early settlers of Michigan Territory, the College was awarded a charter by the Michigan Territorial Legislature in 1835. Early attempts at coeducation were made in 1850 when the legislature approved the founding of the "Albion Female Collegiate Institute." This school for women was controlled by the

Wesleyan Seminary corporation until 1857 when the two schools merged under the name of "The Wesleyan Seminary and Female College at Albion."

On February 25, 1861, Albion was fully authorized by the State legislature to confer a full four-year college degree upon both men and women.

From the time the cornerstone was laid for the first permanent building in 1840 until today, Albion College has remained on the same site, the original part of which is now affectionately called "the Quad." In 1861 there were only two classroom buildings. By 1901, Albion had added a chapel, an observatory, a gymnasium, a chemistry building and a library.

Today Albion stands on 225 acres with more than 30 major buildings, and from 500 students in 1901, enrollment has grown to 1,300 students. Full-time faculty today number 126, and the College has over 23,000 living alumni.

Emphasis on excellence in liberal arts education became the Albion College hallmark through the years, and in 1940 Albion was the first private college in Michigan to be awarded a chapter of Phi Beta Kappa. Today the College remains true to its liberal arts commitment.

The campus itself has also changed dramatically in recent years. Since 1975, Albion has built the Herrick Center for Speech and Theatre, Sprankle-Sprandel Stadium, the Whitehouse Interpretive Center, Dean Aquatic Center, Mudd Learning Center, Olin Hall, Dow Recreation and Wellness Center, Kellogg Center, the Mae Harrison Karro Residential Village, the Ferguson Student, Technology, and Administrative Services Building and Kresge Hall. In addition, many older campus buildings have been thoroughly renovated.

# Albion's Principals and Presidents

Charles F. Stockwell, Principal, 1843-1845
Clark T. Hinman, Principal, 1846-1853
Ira Mayhew, Principal, 1853-1854
Thomas H. Sinex, President, 1854-1864
George B. Jocelyn, President, 1864-1869 and 1871-1877
J. L. G. McKown, President, 1869-1870
William B. Silber, President, 1870-1871
Lewis R. Fiske, President, 1877-1898
John P. Ashley, President, 1898-1901
Dr. Samuel Dickie, President, 1901-1921
John W. Laird, President, 1921-1924
Dr. John L. Seaton, President, 1924-1945
Dr. William W. Whitehouse, President, 1945-1960
Dr. Louis W. Norris, President, 1960-1970
Dr. Bernard T. Lomas, President, 1970-1983
Dr. Melvin L. Vulgamore, President, 1983-1997
Dr. Peter T. Mitchell, President, 1997-2007
Dr. Donna M. Randall, President, 2007-2013
Dr. Michael L. Frandsen, Interim President, 2013-2014
Dr. Mauri A. Ditzler, President, 2014-2020

Dr. Mathew B. Johnson, President, 2020-Present

# Appendix: Privacy Rights Policy

# Albion College Policy on The Family Educational Rights and Privacy Act (FERPA)

The Family Educational Rights and Privacy Act (The Act) of 1974 (as amended) is a federal law which states (a) that a written institutional policy must be established and (b) that a statement of adopted procedures covering the privacy rights of students be made available. The Act provides that the institution will maintain the confidentiality of student educational records and access to them by students.

# FERPA Definition of Records

The Act defines education records as records, files, documents and other recorded materials which contain information directly related to a student and which are maintained by Albion College or a person acting for the College. The term education record does not include records of instructional, supervisory and administrative personnel and educational personnel ancillary thereto that are in the sole possession of the maker thereof and which are not accessible or revealed to any other person except a substitute; records on a student who is 18 years of age or older that are created or maintained by a physician, psychiatrist, psychologist or other recognized professional or paraprofessional acting in a professional or paraprofessional capacity, or assisting in that capacity and in connection with the provision of treatment to the student, and are not available to anyone other than persons providing such treatment, provided, however, that such records can be personally reviewed by a physician or other appropriate professional of the student's choice; records of students as employees unless the employment results from the employee's status as a student; and alumni records.

# Access to Records

FERPA accords all the rights under the Act to all students at the College. This includes the right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent. Albion College will make disclosures without consent in these circumstances.

- To school officials with legitimate educational interests. A school official is defined as a person employed by the College in an administrative, supervisory, academic or support staff position (including law enforcement unit and health and counseling staff); a person or company with whom the College has contracted (such as a company providing services with respect to financial aid awards, student insurance, or other administrative support and research services, including those related to student testing and retention; an attorney, auditor or collection agent); a person serving on the Board of Trustees; a student serving on an official committee, such as a disciplinary or grievance committee; or a person assisting a school official in performing his/her tasks (such as employment responsibility). A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his/her professional responsibility.
- Upon request to officials of another school in which a student seeks or intends to enroll.
- To persons or organizations providing students financial aid.
- To accrediting agencies carrying out their accrediting function.
- To persons in an emergency in order to protect the health or safety of students or other persons.

Albion College will also release information to be in compliance with a judicial order; this release will occur only after an attempt has been made to contact the student at the current campus or last known permanent address.

Under certain circumstances information may be released to parent(s)/guardian(s). On an annual basis, students are expected to notify the Office of the Vice President for Student Development whether or not, for tax purposes, students are dependents claimed on the income tax return of their parent(s)/guardian(s). The vice president for student

development will facilitate this notification process. A representative of the College may communicate with parent(s)/guardian(s) relative to the following circumstances: discontinuance of enrollment; medical (including psychiatric) and/or psychological examinations required for the maintenance of enrollment as determined by the vice president for student development; alleged violation of a College regulation that will likely result in suspension or expulsion from the College if the student is found responsible; absence from the campus when there is reason to be concerned for the student's well-being because the student's whereabouts are unknown; mid-term grades; academic or disciplinary probation; needed medical or psychological attention, the nature of which might jeopardize a student's ability to maintain the status of enrolled. Parent(s) or guardian(s) in these cases will be defined as the individual the student has recorded as the parent(s) or guardian(s) on the admissions application or as emergency contacts. A student may change this designation at any time at the Registrar's Office.

A record of all disclosures will be maintained in the student record, except when the request is made by (1) the eligible student, (2) a school official who has been determined to have a legitimate educational interest, (3) a party with written consent from the eligible student, or (4) a party seeking directory information. The record of each disclosure will contain the name of the parties who have requested or received information and the legitimate interest the parties had in requesting or obtaining the information.

A listing of the types, locations and custodians of education records follows.

The rights of this policy are extended to all students enrolling in Albion College after January 1, 1975.

# Directory Information

Directory information is the property of Albion College. At its discretion, the College may provide directory information in accordance with the provisions of the Act to include: name, permanent home city and state, name of parent(s)/guardians(s), local address, local telephone number, e-mail address, dates of enrollment, degrees earned, dates of degrees, class year, majors, minors, concentrations, adviser, awards/honors/scholarships, photographs, sports and activities, and height and weight of members of athletic teams. The College, including faculty, staff, and students, may not release directory information to any party on or off campus if the intent is to contact students for purposes such as (a) to increase an agency's membership, financial gain, or event promotion, and (b) to promote an individual's candidacy. It should be known that it is the College's choice to release this information, and careful consideration is given to all requests to insure that the information is not released indiscriminately. A student may withhold directory information by notifying the Registrar's Office in writing within two weeks after the first day of class for the term.

Requests for non-disclosure will be honored by the institution for only one academic year; therefore, authorization to withhold directory information must be filed annually in the Registrar's Office.

# Review Process

The Act provides students with the right to inspect and review information contained in their educational records, to challenge the contents of their educational records, to have a hearing if the outcome of the challenge is unsatisfactory, and to submit explanatory statements for inclusion in their files if they feel the decisions of the hearing panel to be unacceptable. The Registrar's Office and the Vice President for Student Development's Office have been designated by the institution to coordinate the inspection and review procedures for student educational records, which include admissions, personnel, academic and financial files, and placement records. Students wishing to review their education records must make written requests to the registrar or the vice president for student development, listing the item or items of interest. Records covered by the Act will be made available within 45 days of the request. All documents will be reviewed in the presence of a designated official. Any document a student may see he/she may have copies of, unless a financial hold exists, the document involves another person, or the student has waived his or her right to access. These copies would be made at the student's expense at 10 cents a page.

# Restricted Information

As outlined by the Act, a student may not inspect and review the following: financial information submitted by parent(s)/guardian(s); letters of recommendation to which the student has waived the rights of inspection and review; or education records containing information about more than one student, in which case the institution will permit access only to that part of the record which pertains to the inquiring student. The institution is not required to permit a student to inspect and review confidential letters and recommendations placed in the files prior to January 1, 1975, provided the letters were collected under established policies of confidentiality and were used only for the purposes for which they were collected.

# Challenge Procedures

A student who believes that an education record contains information that is inaccurate or misleading or otherwise in violation of his/her privacy or other rights may ask the College to amend a record. The student should write the College official responsible for the record, clearly identify the part of the record he/she wants changed, and specify why the student believes it is inaccurate or misleading. The College official should consult with the vice president for student development or the registrar. If the decisions of the College official are in agreement with the student's request, the appropriate record will be amended. If not, the student will be notified within a reasonable period of time that the record will not be amended, and the student will be informed by the registrar or the vice president for student development of the right to a formal hearing. A request for a formal hearing must be made in writing to the chief academic officer (provost), who, within a reasonable period of time after receiving such request, will inform the student of the date, place and time of the hearing. Such a written request will be deemed a consent to disclosure to the hearing panel of the student's record to the extent necessary for the appeal to be considered and decided. The hearing will be conducted according to the challenge procedure adopted by the College. At the hearing, the student may present evidence relevant to the issues raised and may be assisted or represented at the hearings by not more than two people of the student's choice. The hearing panel that will adjudicate such challenges will be the chief academic officer (provost), the registrar if the challenge concerns a document maintained by the vice president for student development, the vice president for student development if the challenge concerns a document maintained by the registrar, two faculty members selected by the Faculty Steering Committee and two student members selected by Student Senate. No member of the hearing panel may have a direct interest in the outcome of the hearing.

Decisions of the hearing panel will be final, will be based solely on the evidence presented at the hearing, and will consist of a written determination which will include a summary of the evidence, the decision, and the reasons for the decisions, and will be delivered to all parties concerned. The panel may decide to revise or amend a record by inserting corrective information into the student's file, or to allow a record to stand. If the decision is unsatisfactory to the student, the student may place with the education record statements commenting on the information in the record or statements setting forth any reasons for disagreeing with the decisions of the hearing panel. The statements will be placed in the education record, maintained as part of the student record, and released whenever the record in question is disclosed.

A student has the right to submit a written complaint to the Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue SW, Washington, D.C. 20202-4605, if the student believes the College has violated the student's right under the Family Education Rights and Privacy Act. Revisions, clarifications and changes may be made in this policy at any time and will be effective upon publication by e-mail, printed announcement distributed to all students, posting in a prominent location on campus, or any combination of those means, or publication in subsequent editions of the *Student Handbook*.

# Annual Notification

Students will be notified of their FERPA rights annually by publication in the *Student Handbook*.

Types, Locations and Custodians of Records

The following is a list of the types of records that the College maintains, their locations and their custodians.

| Types | Location | Custodian |
|---|---|---|
| Admissions Records | Vice President for Student Development Ferguson Building | Vice President |
| Cumulative Academic Records | Registrar's Office Ferguson Building | Registrar |
| Health Records | Student Health Services Cass Street Building | Director |
| Counseling Records | Counseling Services 616 E. Michigan Ave. | Director |
| Financial Aid Records | Office of Financial Aid Ferguson Building | Director |
| Financial Records | Accounting Office Ferguson Building | Accounting Manager |
| Placement Records | Career Development Ferguson Building | Director |
| Progress Records | Registrar's Office Ferguson Building | Registrar |
| | Faculty Office Individual Office | Instructor, Adviser |
| Disciplinary Records | Vice President for Student Development Ferguson Building | Vice President |
| Occasional Records (Student education records not included in the types above such as minutes of faculty committee meetings, copies of correspondence in offices not listed, etc.) | Appropriate official will collect such records, direct the student to their location, or otherwise make them available for inspection and review | The College official who maintains such occasional records |

**PDFs:**

## Tuition and Fees

View historical tuition and fees
Off-Campus Program Billing Information (PDF)

**Student Forms and Documents**

Questions About Your Bill.pdf
Consent to Release Information form

**Faculty/Staff Forms and Documents**

Accounting_Policies.pdf
CASH_REMITTANCE_Form.xls

Cash Advance Form.pdf
Certification_of_Tax_Exemption.pdf
Direct Pay Form.xls
GIFT_RECEIPT_REMITTANCE_Form.xls
Mileage_Log.xls
Petty_Cash_Reconciliation.xls
Petty_Cash_Request_Form.xls
Reimbursement_Form_2016.xls
STANDARD TRANSFER_FORM.xls

# Center for International Education (CIE)

**Center for International Education (CIE)**

Albion College is home to international students from Asia, Europe, and South/ Central America. With over 100 study abroad options to choose from, global learning opportunities exist for students both on and off-campus. The Center for International Education (CIE) works to connect Albion's campus with the global community through study abroad engagement, and on-campus programs that foster intercultural communication and leadership skills. Along with Albion College faculty, staff, and community, CIE promotes intercultural exchange, cross-cultural understanding, and global competencies between the people of Albion College and the global community.

Study Abroad: The Center for International Education provides a variety of individual advising options for students who wish to study abroad. These sessions include program selection, choosing off-campus classes, estimating study abroad costs and creating budgets, providing travel know-how, and assisting with general visa advising. Albion-approved study abroad programs are available in Africa, Asia, North, South and Central America, the Carribean, the Middle East, and Australia/ Pacific Islands. To see a full list of off-campus programs approved for Albion credit, suggested by major, visit the Off-Campus Programs website or contact the Center for International Education (CIE), Vulgamore Hall 306.

International Students at Albion College: Albion College is proud of its native language teaching assistants, exchange students, and full-time degree seeking international students, who contribute to the richness of Albion's global diversity. The Center for International Education provides international students with on-campus support, immigration advising, and cultural activities that support their broader integration into the Albion College community.

# Introduction & Curriculum Overview

At the heart of the Albion Experience is an intellectually stimulating commitment to the liberal arts. Albion's core curriculum is a program of learning that is initiated with the First-Year Seminar and culminates with the conferring of the bachelor's degree. Students begin their academic careers in a First-Year Seminar designed to familiarize them with the liberal arts tradition in an intimate classroom environment that fosters open communication, nurtures critical thinking, and promotes improvement in writing and speaking. Albion is committed to having students complete their undergraduate education with an experience that brings continuity, coherence and focus to their academic course work and that involves the students themselves, soon-to-be graduates, as teachers, facilitators and presenters.

Between the First-Year Seminar and graduation, students complete other core courses: five Modes of Inquiry courses and four category requirements. These courses provide analytic tools for understanding the world, offer rich and complex accounts of social life, encourage examination of these accounts, and contribute to a profound understanding of the interconnectedness of learning and living in a global community. In addition, courses are distributed across the four divisions of the College: fine arts, humanities, natural sciences and mathematics, and social sciences. The liberal arts core serves as the impetus and context for lifelong learning, preparing students for the phase after college when

they must themselves provide education and expertise as well as continue to learn, collaborate, and facilitate at home, at work, and in a local and global community.

In addition to the core curriculum, all students are required to complete a major, which provides a depth of intellectual study that prepares students for graduate and professional school, as well as for a rich diversity of careers and life experiences. These majors may be a conventional departmental major, a not-so-conventional interdepartmental major or the unconventional individually designed major. A commitment to academic excellence within all academic departments ensures every student that fulfilling the requirements of the major will be a comprehensive and challenging scholarly experience. Other opportunities for in-depth exploration and clustering of courses include minors and concentrations.

Choice characterizes the general education requirements as well as the major. Each Albion student is an adult, capable of making sensible decisions about his or her personal future. But inherent in the right to make decisions is the potential to make mistakes. So Albion College provides assistance to students in planning their education. During their first year at Albion College, academic advisers are assigned to all students to monitor academic progress and help each student begin fulfilling his or her graduation requirements. After the first year, students are free to choose a faculty adviser who will help develop a program of study based on the student's goals. Students who do not meet with their adviser during each semester's academic advising period will not be allowed to register until they have proof of advising.

**It is ultimately the student's responsibility to be aware of and fulfill all graduation requirements.** To assist students in this endeavor, the Registrar's Office prepares and maintains an audit for each student at the end of the sophomore year. These reports indicate progress toward completing graduation requirements. Students are provided with updated audits prior to each fall semester. Audits are available from the student's adviser or directly through the Registrar's Office.

# Curriculum Overview

The primary responsibility for meeting the College's academic requirements rests with each student. This chart serves as a guide to the required and elective courses that fulfill the units needed for graduation. They are explained in greater detail on the following pages. The complete requirements for graduation are outlined in the Academic Regulations section of this catalog.

**Core Requirement**

**I. Liberal Arts 101 (First-Year Seminar; 1 unit)**

**II. Modes of Inquiry (1 unit in each)**

Artistic Creation and Analysis
Historical and Cultural Analysis
Modeling and Analysis
Scientific Analysis
Textual Analysis

**III. Category Requirements (1 unit in each)**

Environmental Studies
Ethnicity Studies
Gender Studies
Global Studies

The Brown Honors Program core requirements are found in the Programs of Study section.

**Units for Core: 10**

**Among the 32 units required for graduation, the following distribution of courses must also be fulfilled. These courses can count toward modes, categories, majors, minors and/or concentrations.**

- Two units in humanities (can be from same department): English, Modern Languages and Cultures, Philosophy, Religious Studies, Honors
- Two units in mathematics or natural sciences (can be from same department): Biology, Chemistry, Computer Science, Geological Sciences, Mathematics, Physics, Honors
- Two units in social science (can be from same department): Anthropology and Sociology, Communication Studies, Economics and Management, History, Political Science, Psychology, Honors
- One unit in fine arts: Art and Art History, Music (including up to four 1/4-unit music ensembles), Theatre, Honors

**Major Requirement: All students are required to complete an approved major.**

Accounting
Anthropology
Anthropology and Sociology
Art (Studio Art)
Art History
Athletic Training
Biochemistry
Biology
Business and Organizations
Chemistry
Communication Studies
Earth Science
Economics and Management
English
Environmental Science
Environmental Studies
Ethnic Studies
Exercise Science
Finance
French
Geological Sciences
German
History
Individually Designed Major
International Studies
Mathematics
Mathematics/Economics
Mathematics/Physics
Music
Philosophy
Physics
Political Science
Psychology
Public Policy
Religious Studies
Sociology
Spanish
Sustainability Studies
Theatre
Women's and Gender Studies

**Units for Major: 8-10**

**Minors: Students may choose to complete a minor.**

**Departmental and Interdisciplinary Minors**

- Anthropology
  - Anthropology,
  - Anthropology/Sociology
- Art
  - Art, Art History
- Biology
  - Cell and Molecular Biology
  - Environmental Biology
- Business and Organizations
- Chemistry
- Communication Studies
- Computer Science
- Economics and Management
  - Accounting—Corporate Track, Economics, Finance, Management
- Education
  - Educational Studies
- English
- Foreign Language
  - French, German, Spanish
- Gender Studies
- Geological Sciences
  - Geology, Environmental Geology, Geographic Information Systems, Paleontology
- History
- Mathematics
  - Mathematics, Applied Mathematics, Statistics, Computer Science
- Philosophy
  - Philosophy, History of Philosophy, Philosophy of Mind, Value Theory
- Physics
- Political Science
- Psychology
- Religious Studies
- Sociology
  - Sociology, Anthropology/Sociology
- Theatre
- Women's Studies

**Concentrations: Students may also choose to complete a concentration designed to prepare them for specific careers. Some of these concentrations are linked to the College's Institutes and Centers, and, in these cases, students must be admitted to the respective Institute or Center to participate fully in its curriculum. The available concentrations are listed below.**

Environmental Science
Environmental Studies
Human Services
Law, Justice, and Society
Neuroscience
Public Policy and Service

**Institutes, Centers, Programs**

Prentiss M. Brown Honors Program
Center for Sustainability and the Environment
Gerald R. Ford Institute for Leadership in Public Policy and Service
Carl A. Gerstacker Institute for Business and Management Institute for Healthcare Professions
Fritz Shurmur Center for Teacher Development

**General Electives: Electives are courses that do not count toward a specific program (such as a major) but contribute toward the total units needed for graduation.**

**Units for Electives: 12-14**

**Writing Competency Examination:** All students must also pass the writing competence requirement before they graduate.

# Total Units for Graduation: 32

# The Core Requirement

At Albion, the general education requirement is referred to as "the core." Students begin to fulfill the core in their first semester with Liberal Arts 101; some will be able to complete much of the core requirement by the end of their first year.

**I. Liberal Arts 101** (First-Year Seminar; 1 unit)

**II. Modes of Inquiry (1 unit in each)**

Textual Analysis
Artistic Creation and Analysis
Scientific Analysis
Modeling and Analysis
Historical and Cultural Analysis

**III. Category Requirements** (1 unit in each)

Environmental Studies
Ethnicity Studies
Gender Studies
Global Studies

Students must also complete a distribution as follows: one unit in fine arts (art and art history, music, theatre, honors), two units in humanities (English, foreign languages, philosophy, religious studies, honors), two units in mathematics or natural sciences (biology, chemistry, computer science, geological sciences, mathematics, physics, honors) and two units in social science (anthropology and sociology, economics and management, history, political science, psychology, speech communication, honors).

# The Core Requirement

At Albion, the general education requirement is referred to as "the core." Students begin to fulfill the core in their first semester with Liberal Arts 101; some will be able to complete much of the core requirement by the end of their first year.

# I. Liberal Arts 101

(First-Year Seminar; 1 unit)

# Liberal Arts 101: First-Year Seminars

The First-Year Seminars are distinguished by their small class size and close personal attention. Students select from a wide variety of seminars in which academic skills, creativity, active inquiry and collegiality are nurtured. Seminars introduce first-year students to college life by focusing on the process of learning, in and out of the classroom. Seminars share a common weekly community meeting that emphasizes student academic and social transitions. In addition, the First-Year Seminars foster co-curricular outreach. First-Year Seminars have the following characteristics.

1. They are inquiry-based, writing-intensive, focused on developing critical thinking skills, and they emphasize discussion.
2. They are as interdisciplinary as possible, exploring multiple modes of inquiry.
3. They nurture creativity in all forms.
4. They encourage community-building and outreach as well as co-curricular experiences.

# II. Modes of Inquiry

(1 unit in each)

- Textual Analysis
- Artistic Creation and Analysis
- Scientific Analysis
- Modeling and Analysis
- Historical and Cultural Analysis

The Modes of Inquiry core requirement reflects the awareness that there are several fundamental types of analysis that scholars use to understand the world. All Albion College courses require students to employ analytical and creative tools while completing course assignments. A Mode course, however, requires both professor and student to approach the teaching and thinking process with a significantly higher level of self-awareness and intentionality. Students are required not only to think, but also to think about their thinking.

# Textual Analysis

Analyzing a text (including works of art and music, written and oral texts, and rituals and symbols) involves understanding not only what meaning that text holds but also how those meanings are produced, what purposes they serve, and what effects they have, as well as exploring the ways in which a text conveys meaning. In order to fulfill this mode of inquiry, courses must:

1. Focus on the methods of analysis employed by at least one specific discipline or area of scholarship;
2. Foster inquiry into the particular strengths and weaknesses of those methods;
3. Require students to analyze texts in writing;
4. Foster inquiry into the intellectual or cultural systems that produce the text's meaning and effects.

# Artistic Creation and Analysis

Courses in this mode focus on the uniquely symbolic and expressive way in which the arts explore and express ideas and feelings. In order to fulfill this mode of inquiry, courses must:

1. Require the creation or performance, and the analysis of works of art;
2. Work with culturally produced rather than naturally occurring objects or experiences that have artistic, social or historical significance (for example, art objects, works of literature or various types of performances);
3. Introduce appropriate forms of critical inquiry and analysis, including area-specific vocabularies, materials, techniques and/or methodologies;
4. Encourage students to become critical and introspective about their cultural experiences;
5. Focus on the methods and materials by which the work produces meaning as well as what meanings are to be produced, emphasizing the dialogue between form and content in the area of study.

## Scientific Analysis

Courses in this mode involve the observation and interpretation of the natural world. In order to fulfill this mode of inquiry, courses must:

1. Explore the subject matter and methodology of one or more of the natural sciences;
2. Demonstrate how fundamental principles of these disciplines form the basis for deriving specific results;
3. Require students to make observations and formulate hypotheses to explain their observations;
4. Require students to test their hypotheses or other scientific theories to appreciate their strengths and weaknesses;
5. Demonstrate applications to human society and the natural world;
6. Include a laboratory as a significant component of the course.

## Historical and Cultural Analysis

Courses in this mode focus on how human knowledge is determined by its cultural and historical context, and how this knowledge in turn shapes cultures and creates historical change. In order to fulfill this mode of inquiry, courses must:

1. Include material significantly removed from the students' experience either by virtue of cultural or historical distance;
2. Direct students to investigate their own cultural and historical moment from a perspective informed by their study of culture or history;
3. Require students to explore the specific cultural context of artifacts, to the extent that the course covers artifacts of a different culture or from a different historical period.

# III. Category Requirements

(1 unit in each)

- Environmental Studies
- Ethnicity Studies
- Gender Studies
- Global Studies

Students must also complete a distribution as follows: one unit in fine arts (art and art history, music, theatre, honors), two units in humanities (English, foreign languages, philosophy, religious studies, honors), two units in mathematics or natural sciences (biology, chemistry, computer science, geological sciences, mathematics, physics, honors) and two units in social science (anthropology and sociology, economics and management, history, political science, psychology, speech communication, honors).

# Additional Information

A liberal arts education prepares students to play a critical, thoughtful role as citizens in their society. Courses in environmental, ethnicity, gender and global studies deepen students' understanding of themselves, society and the world by introducing them to many different perspectives. To this end, all students are required to take one unit each in environmental studies, ethnicity studies, gender studies and global studies as specified below.

# Environmental Studies

Students are required to take one unit from the list of courses approved as satisfying the ethnicity studies requirement (see www.albion.edu/registrar/). Many of these courses also will satisfy a requirement in a major, in a program or in a concentration. Each approved course meets the following criteria:

1. It must substantially enhance students' understanding of the earth's environment.
2. It must deal substantially with the consequences of human intervention into natural systems.
3. It must lead students to view the relationship among elements of environmental systems from an interdisciplinary perspective.
4. It must focus on the perspectives that environmental studies brings to the discipline.

# Ethnicity Studies

Students are required to take one unit from the list of courses approved as satisfying the ethnicity studies requirement (see www.albion.edu/registrar/). Many of these courses also will satisfy a requirement in a major, in a program or in a concentration. Each approved course meets the following criteria:

1. It must foster inquiry into the cultural construction of ethnicity.
2. It must focus on the perspectives that ethnicity brings to the discipline.
3. It must place the issues of ethnicity in their historical context. This may include the rediscovery of marginalized texts.
4. It must provide students with the opportunity to examine their own experiences with ethnicity.

# Gender Studies

Students are required to take one unit from the list of courses approved as satisfying the gender studies requirement (see www.albion.edu/registrar/). Many of these courses also will satisfy a requirement in a major, in a program or in a concentration. Each approved course meets the following criteria:

1. It must foster inquiry into the cultural construction of gender.
2. It must focus on the perspectives that gender brings to the discipline.
3. It must place the issues of gender in their historical context. This may include the rediscovery of marginalized texts.

# Global Studies

Students have two options in fulfilling this category. (1) They may successfully participate in any approved off-campus study program outside of the United States (or the Border Studies Program) for at least one semester and submit a journal reflecting on their experiences. Detailed journal requirements are available at the Center for International Education. International students may fulfill the global category by submitting a journal, subject to the same requirements, reflecting on their experiences at Albion. (2) They may take one unit from the list of courses approved as satisfying the global studies requirement (see www.albion.edu/registrar/). Many of these courses also will satisfy a requirement in a major, in a program or in a concentration. Each approved course meets the following criteria:

1. It must have as an organizing focus topics that are international (focusing on a particular region) or global (focusing on an issue pertaining to multiple regions or countries).
2. It must foster inquiry into the interconnectedness of international issues and students' lives.

3. It should attempt to bring the world into the classroom so that students learn how to function in an international environment and gain a deeper understanding of the world outside the United States.

# The Writing Competence Requirement

Continuous development as a writer is a central part of a liberal arts education. All first-year students and new transfer students are required to take a written placement examination during orientation. The majority of students are placed into and encouraged to enroll in ENGL 101, English Composition. Some students will be invited to enroll in ENGL 101H, the honors section of English Composition. ENGL 101 and ENGL 101H serve as prerequisites for all other writing courses. Those students who are placed into ENGL 100, Writing Essentials, must complete the class during their first full semester at Albion. A student placed into ENGL 100 may drop or withdraw from the course only if diagnostic testing done the first week of class alters the student's placement. The class must be taken for a numerical grade. Each year, a few students place out of first-year writing classes. During the sophomore year, these students may enroll in ENGL 203, Advanced Expository Writing; ENGL 205, Introductory Creative Writing; or ENGL 207, Contemporary Journalism.
In order to graduate from Albion, all students must pass a Writing Competence Examination unless they received a 4 or 5 on the CEEB Advanced Placement Test in English Composition or were excused because of a high score on the Albion College Writing Placement Examination taken by entering students.

The Writing Competence Examination (WCE) must be taken before the middle of the sophomore year. Students who do not pass on their first attempt must try the examination a second time before the end of their sophomore year. Upon a second failure, students must contact the director of writing and schedule a meeting to review their most recent WCE. After this initial consultation with the director of writing, students will be required to participate in appropriate writing practice and/or tutoring prior to attempting the examination a third time. See below for the steps required by the director of writing.

Students who have completed 14 units or more, but who have not fulfilled the writing competence requirement--or taken appropriate steps with the director of writing to prepare for this examination--will be required to register for subsequent semesters with the sophomore class. Transfer students who have completed 14 units or more (including transfer courses) will be expected to have taken and passed the WCE before the start of their third semester at Albion College. If the WCE is not successfully completed by the start of the third semester, the student will be required to register for subsequent semesters with the sophomore class.

Appropriate steps with the director of writing include all of the following:

1. an initial meeting with the director to review the student's most recent failed WCE;
2. arrangements determined in consultation with the director for appropriate writing practice and/or tutoring from Writing Center staff;
3. review of writing strategies and guidelines, and practice WCE writing until the student is authorized by the director to attempt the WCE again.

No student may receive a degree from Albion College unless the writing competence requirement has been fulfilled. The WCE will be scheduled at least six times each academic year, and no special arrangements will be made for seniors who have not passed by the last examination, except for those students who have consulted with the director of writing and taken appropriate steps to improve their writing.