

Allegheny College

Academic Bulletin

2016-2017

Contents

Contents.....	2
Our Mission	1
Statement of Community	1
Allegheny’s Institutional Learning Outcomes.....	1
Academic Calendars	2
2016-17 Academic Calendar	2
2017-18 Academic Calendar	2
The Academic Honor Code	3
The Curriculum	5
Divisions	5
Graduation Requirements.....	7
The First-Year/Sophomore (FS) Requirement.....	7
The Major Requirement.....	7
The Minor Requirement.....	9
The Distribution Requirements.....	11
The Junior Seminar Requirement.....	12
The Senior Project Requirement.....	12
The Credit Requirement.....	13
The Grade Requirement.....	13
The Residency Requirement	13
Curricular Options	14
American Honors Program.....	14
Internships	14
Study Away Programs	14
Cooperative Programs	17
Pre-Professional Programs and Advising	19
Academic Resources—The Learning Commons	22
Academic Regulations and Policies	22
The Semester Calendar	22
The Credit System	22
Course Load.....	22
Class Standing	22
Final Examinations	22
Grading System	23
Repeated Courses	24
Transfer of Courses	25

Concurrent Enrollment	26
College Credit for Prior Coursework	26
Course Registration	27
Adding and Dropping Courses.....	27
Withdrawing From a Course	27
Internship Registration.....	28
Academic Records and Reports	29
Grade Reports	29
Transcripts and Student Records	29
Academic Standing.....	29
Leaves of Absence	32
Withdrawal From the College and Readmission	33
Honors	35
Courses of Instruction	37
Course Classification and Distribution Requirements.....	37
The Credit System	38
The Numbering System.....	38
Arabic	40
Arabic Courses	40
Art.....	41
Art Learning Outcomes	41
Majors: Studio Art; Art History; Art and Technology	42
Minors: Studio Art, Art History	44
Art Courses.....	45
Art and the Environment.....	52
Learning Outcomes	52
The Art and the Environment Minor	52
Art and the Environment Courses.....	53
Biochemistry.....	54
Biochemistry Learning Outcomes	54
The Biochemistry Major	54
Biochemistry Courses.....	55
Biology	56
Biology Learning Outcomes	56
The Biology Major	57
The Biology Minor	58
Off-Campus Study in Marine Biology	59
Biology Courses	59
Black Studies.....	66
Black Studies Learning Outcomes	66

The Black Studies Minor	66
Black Studies Courses.....	67
Chemistry	69
Chemistry Learning Outcomes	69
The Chemistry Major.....	69
The Chemistry Minor	70
Cooperative Engineering Program	71
Chemistry Courses	71
Chinese	75
The Chinese Minor	75
Chinese Courses	75
Chinese Studies	77
Chinese Studies Learning Outcomes	77
The Chinese Studies Minor	77
Chinese Studies Courses	78
Classical Studies.....	79
Classical Studies Learning Outcomes	79
The Classical Studies Minor.....	79
Classical Studies Courses.....	80
Communication Arts and Theatre	81
Communication Learning Outcomes.....	81
The Communication Major	82
The Communication Minor	83
Theatre Learning Outcomes.....	83
The Theatre Major	83
The Theatre Minor	84
Communication Arts Courses.....	84
Community and Justice Studies.....	92
Community and Justice Studies Learning Outcomes	92
The Community and Justice Studies Major	93
The Community and Justice Studies Minor	94
Community and Justice Studies Courses.....	95
Computer Science	97
Computer Science Learning Outcomes	97
The Computer Science Major.....	98
The Applied Computing Major	98
The Computer Science Minor	100
Computer Science Courses	101
Dance and Movement Studies	105
Dance and Movement Studies Learning Outcomes.....	105

The Dance and Movement Studies Minor	105
Dance and Movement Studies Courses	106
Economics.....	111
Economics Learning Outcomes	111
The Economics Major.....	111
The Economics Minor.....	113
Economics Courses.....	113
Education Studies	120
Education Studies Learning Outcomes	120
The Education Studies Minor	120
Education Courses.....	122
English	124
English Department Learning Outcomes	124
The English Major.....	125
The English Minor	126
The Writing Minor	127
The Environmental Writing Minor	127
English Courses	128
Environmental Science	135
Environmental Science Learning Outcomes	136
The Environmental Science Major	136
Environmental Studies Learning Outcomes.....	137
The Environmental Studies Major.....	138
Off-Campus Courses and Internships.....	139
Environmental Science Courses	139
Experiential Learning.....	147
Experiential Learning: Learning Outcomes	147
Experiential Learning Courses.....	147
First-Year/Sophomore Seminars	149
FS Learning Outcomes.....	149
FS Courses	149
French.....	151
The French Major.....	151
The French Minor.....	152
French Courses.....	152
French Studies	155
French Studies Learning Outcomes	155
The French Studies Minor	155
French Studies Courses	156
Geology	157

Geology Learning Outcomes	157
The Geology Major.....	158
The Environmental Geology Major	159
The Geology Minor	160
Off-Campus Study in Marine Geology.....	161
Geology Courses	161
German.....	166
The German Major.....	166
The German Minor.....	166
German Courses.....	167
Global Health Studies	169
Global Health Studies Learning Outcomes.....	169
The Global Health Studies Major	169
The Global Health Studies Minor	171
Global Health Studies Courses	171
History	174
History Learning Outcomes.....	174
The History Major	174
The History Minor	175
History Courses	176
Interdisciplinary Programs and Courses.....	188
Interdisciplinary (INTDS) Courses.....	188
International Studies	191
International Studies Learning Outcomes.....	191
The International Studies Major	191
International Studies Courses	196
Jewish Studies	197
Jewish Studies Learning Outcomes.....	197
The Jewish Studies Minor	197
Jewish Studies Courses	197
Journalism in the Public Interest	198
Journalism in the Public Interest Learning Outcomes.....	198
The Journalism in the Public Interest Minor	198
Journalism in the Public Interest Courses	198
Latin.....	201
Latin Learning Outcomes	201
The Latin Minor	201
Latin Courses.....	201
Latin American and Caribbean Studies.....	203
Learning Outcomes for Latin American and Caribbean Studies	203

The Latin American and Caribbean Studies Minor.....	203
Latin American and Caribbean Studies Courses.....	204
Mathematics	205
Mathematics Learning Outcomes	205
The Mathematics Major.....	205
The Mathematics Minor.....	207
Mathematics Courses.....	207
Medieval and Renaissance Studies	211
Medieval and Renaissance Studies Learning Outcomes	211
The Medieval and Renaissance Studies Minor.....	211
Medieval and Renaissance Studies Courses	212
Middle East and North African Studies	213
Middle East and North African Studies Learning Outcomes.....	213
The Middle East and North African Studies Minor (“MENA”).....	213
Middle East and North African Studies Courses	214
Modern and Classical Languages.....	215
Learning Outcomes for Modern Languages.....	215
Arabic	217
Center for Language and Culture (CLC).....	218
Chinese.....	218
French	218
German	218
Latin	219
Literature in Translation Courses	219
Spanish	219
Sophomore Seminar in Modern Languages.....	219
Music	220
Music Learning Outcomes.....	220
The Music Major	220
The Music Minor	221
Music Courses	222
Neuroscience.....	228
Neuroscience Learning Outcomes	228
The Neuroscience Major	228
Neuroscience Courses.....	229
Philosophy	231
Philosophy Learning Outcomes.....	231
The Philosophy Major	231
The Philosophy Minor	232
Philosophy Courses	232

Physics	236
Physics Learning Outcomes.....	236
The Physics Major	237
The Physics Minor	238
The Astronomy Minor	238
Physics Courses	239
Political Science	243
Political Science Learning Outcomes	243
The Political Science Major	243
The Political Science Minor	246
Political Science Courses	246
Psychology.....	255
Psychology Learning Outcomes	255
The Psychology Major	255
The Psychology Minor.....	256
Psychology Courses.....	256
Religious Studies.....	269
Religious Studies Learning Outcomes	269
The Religious Studies Major	269
The Religious Studies Minor.....	271
Religious Studies Courses.....	271
Sociology and Anthropology	277
Sociology and Anthropology Courses*	277
Spanish	278
The Spanish Major	278
The Spanish Minor	278
Spanish Courses	279
Sophomore Seminar in Modern Languages.....	282
Theatre: see “Communication Arts”	283
Women’s, Gender, and Sexuality Studies	284
Women’s, Gender, and Sexuality Studies Learning Outcomes.....	284
The Women’s, Gender, and Sexuality Studies Major.....	284
The Women’s, Gender, and Sexuality Studies Minor	286
Womens, Gender, and Sexuality Studies Courses	286

Our Mission

Allegheny's undergraduate residential education prepares young adults for successful, meaningful lives by promoting students' intellectual, moral, and social development and encouraging personal and civic responsibility. Allegheny's faculty and staff combine high academic standards and a commitment to the exchange of knowledge with a supportive approach to learning. Graduates are equipped to think critically and creatively, write clearly, speak persuasively, and meet challenges in a diverse, interconnected world.

Statement of Community

Allegheny students and employees are committed to creating an inclusive, respectful and safe residential learning community that will actively confront and challenge racism, sexism, heterosexism, religious bigotry, and other forms of harassment and discrimination. We encourage individual growth by promoting a free exchange of ideas in a setting that values diversity, trust and equality. So that the right of all to participate in a shared learning experience is upheld, Allegheny affirms its commitment to the principles of freedom of speech and inquiry, while at the same time fostering responsibility and accountability in the exercise of these freedoms. This statement does not replace existing personnel policies and codes of conduct.

(Approved by faculty vote, 20 April 20 2007)

Allegheny's Institutional Learning Outcomes

Allegheny exists to provide students with a liberal arts education of high standards. We expect our graduates to be capable and farsighted leaders and rational and responsible citizens equipped to meet the challenges confronting all society. We expect them to value diversity, individual integrity of thought and action, and the importance of personal rights and freedom in the context of society as a whole. We expect them to know that the same complexities that create the problems and challenges of living also give life its richness.

Allegheny believes that among all possible forms of education, liberal arts and science education best develops individual potential. It enables participants to experience and enjoy life to the fullest, enabling the mind to encompass all aspects of the world. Among other benefits, liberal arts education broadens the kinds of careers, interests, and activities that can be—and are likely to be—pursued. It develops and encourages the use of the imagination, in the creative sense and for solving problems of everyday life. It promotes understanding of others' aspirations and feelings toward the foundation of constructive relationships.

To provide such an education, Allegheny aspires to this academic goal: to develop students' minds and teach them how to learn on their own. While factual knowledge is important, no one can master in four years all that is needed for a lifetime. Most important is engaging students in an active learning process that entails not only comprehending facts, but also taking responsibility for their proper use.

Thus, Allegheny's educational program is designed so that its graduates are able to:

- Think critically and creatively;
- Communicate clearly and persuasively as speakers and writers;
- Invoke multiple ways of understanding to organize and evaluate evidence, and to interpret and make sense of their experiences and the experiences of others;
- Apply their knowledge and learning to engage in informed debate and to analyze and solve problems.

(Approved by faculty vote, 22 January 2015)

Academic Calendars

2016-17 Academic Calendar

Fall Semester 2016

Matriculation	Saturday, August 27
Classes Begin	Tuesday, August 30
Fall Break	October 8–11
Academic Programming Day – no classes	Tuesday, October 25
Thanksgiving Break	November 23–27
Classes End	Tuesday, December 13
Final Exams	December 15–16, 19–20

Spring Semester 2017

Martin Luther King Day – no classes	Monday, January 16
Classes Begin	Tuesday, January 17
Spring Break	March 18–26
Classes End	Monday, May 1
Academic Programming Day	Tuesday, May 2
Final Exams	May 4–5, 8–9
Commencement	Saturday, May 13

2017-18 Academic Calendar

Fall Semester 2017

Matriculation	Saturday, August 26
Classes Begin	Tuesday, August 29
Fall Break	October 7–10
Academic Programming Day – no classes	Tuesday, October 24
Thanksgiving Break	November 22–26
Classes End	Tuesday, December 12
Final Exams	December 14–15, 18–19

Spring Semester 2018

Martin Luther King Day – no classes	Monday, January 15
Classes Begin	Tuesday, January 16
Spring Break	March 17–25
Classes End	Monday, April 30
Academic Programming Day	Tuesday, May 1
Final Exams	May 3–4, 7–8
Commencement	Saturday, May 12

The Academic Honor Code

The Academic Honor Program is designed to promote individual responsibility and integrity in academic affairs and to develop an atmosphere conducive to serious independent scholarship. Allegheny's Honor Code is different than those of many other colleges because it is a student code, developed and upheld by the students themselves rather than imposed by the College administration.

A voluntary honor system was established in 1960, and by 1962 over two-thirds of the student body participated in the program. The following year, the student body voted to make the honor program mandatory. This decision, also approved by the faculty and administration, first applied to the class that entered the College in 1964. Every three years since 1990, the Honor Committee conducts a student referendum to determine if the student body wishes to continue the honor system. The Honor Code has consistently been supported by an overwhelming majority of students. The Honor Program operates under the following Honor Code:

Article I

The Honor Program shall apply to all work submitted for academic credit or to meet non-credit requirements for graduation at Allegheny. This includes all work done in class (examinations, quizzes, and laboratory work), all papers, and any other material so designated by the instructor.

All students who have enrolled in the College will work under the Honor Program. The College assumes that the integrity of each student and of the student body as a whole will be upheld. A primary responsibility of each student is the maintenance of honesty in one's own academic work. In addition, it is the moral obligation of each student to help maintain the integrity of the entire College community.

Article II

By virtue of matriculation in the College, each student acknowledges the following:

I hereby recognize and pledge to fulfill my responsibilities, as defined in the Honor Code, and to maintain the integrity of both myself and the College community as a whole.

Article III

Section 1

If one student observes another committing what appears to be an act of dishonesty in academic work it is the observer's responsibility to take the appropriate action. Students are encouraged to inform either the instructor or a member of the Honor Committee. However, whatever action the observer takes must fulfill the obligation to uphold the integrity of the College community. Failure to do so is as injurious to the honor of the College community as is the observed act of dishonesty and constitutes an infraction of the Honor Code.

Section 2

The following practices are considered to be violations of the Honor Code in examinations, tests, quizzes, and in laboratory and computing exercises, and in any other assigned coursework: any attempt to receive or give unauthorized assistance from written, printed, or recorded aids, from any person, or from another's work. Any attempt to receive or give unauthorized assistance by means of an electronic device (cell phones, PDAs, etc) is also a violation of the Honor Code.

Section 3

Plagiarism is defined as using the ideas or words of another without citing the sources from which the ideas or words are taken. In take-home examinations, papers, and reports, the following must be carefully observed:

- Any sequence of words taken verbatim from another source not original with the student must be enclosed in quotation marks and its source fully and accurately identified. Such material must be quoted accurately.

Honor Code

- Any sequence of words taken verbatim from any other work of the student must be enclosed in quotation marks and its source fully and accurately identified. (See Section 4)
- Where the ideas of another are paraphrased or interpreted, quotation marks cannot be used. In these cases, the student must fully and accurately cite the source. In addition, the language and sentence structure must be that of the student and not of the original source author. While each instructor who assigns a paper, report, or examination may direct students to a particular style for footnote and bibliographic documentation, the rules noted above must be followed. Ignorance here or in any other part of the code is no excuse.

Section 4

No work submitted for one course may be submitted also for another course except with the explicit approval of both instructors.

Section 5

Instructors are expected to explain their policies regarding help received in any assigned work for their course to each class at the start of each term, preferably including the material in a printed syllabus for the course. However, it remains the student's responsibility to know and to understand these policies.

Article IV

Section 1

Tests and examinations at Allegheny need not be proctored. Instructors may remain in the room or in a nearby room but must remain in the building to be available to answer questions that may arise during the course of the examination.

Section 2

Examinations are confined to the building in which they are given. Students shall have freedom of movement within that building. Students may not leave the building or take materials related to the exams into restrooms unless explicitly permitted to do so by the instructor, or unless the instructor declares the test to be written at home or other parts of the campus. Additionally, exams may not be taken behind a locked door. It is the student's responsibility to ensure that the door to the room remains unlocked during the entire exam.

Section 3

Regardless of where the test or examination is taken, the student is responsible for obtaining any changes or corrections. Instructors are not under obligation to search out students to provide this information. Furthermore, the exam must be handed in at the time requested.

Section 4 – Honor Code Pledge

In recognition of the responsibilities of the Honor Program, a student, when submitting a test or paper, shall note **"the work is mine unless otherwise cited"** and sign their full name in signature. If a student neglects to do this, the instructor must notify the student and allow an opportunity for signing the paper. Moreover, work is not to be considered as graded until the pledge appears. The lack of a pledge does not exempt any work from the Honor Code. For electronically submitted assignments, each professor may determine how their students will recognize the pledge.

The Curriculum

As a liberal arts college, Allegheny has as its first concern intellectual growth. The curriculum and graduation requirements are designed to provide educational depth and intellectual breadth. These goals are reflected in Allegheny's Institutional Learning Outcomes:

- Think critically and creatively
- Communicate clearly and persuasively as speakers and writers
- Invoke multiple ways of understanding to organize and evaluate evidence, and to interpret and make sense of their experiences and the experiences of others
- Apply their knowledge and learning to engage in informed debate and to analyze and solve problems

The elements of Allegheny's curriculum work together to provide students with a cohesive program in which all four Institutional Learning Outcomes may be achieved. In particular, the FS program, Junior Seminar, and Senior Project progressively develop students' abilities to read and listen critically, formulate their ideas, and become more effective writers and speakers. The Distribution Requirements introduce students to a variety of ways of organizing and making sense of information, and they develop students' recognition of complexity and difference. The major, with its junior seminar and senior project components, requires a significant degree of expertise in an area of inquiry, in which students are expected to demonstrate critical and creative thinking, clear and persuasive communication, and the ability to apply their learning to engage in informed debate and address challenges within the context of the discipline. The minor requires sustained engagement with a second disciplinary perspective, enabling students to broaden and deepen their facility with critical inquiry and communication. The College supplements the wide range of courses and programs offered locally with cooperative and special arrangements that increase the choices available to students.

Successful completion of Allegheny's four-year program leads to the degree Bachelor of Arts or Bachelor of Science.

Faculty advisors working with their advisees usually find themselves consulting this "Curriculum" section more often than any other part of the *Academic Bulletin*. Much here pertains to the educational life of every student on campus, though other points come into play only under special circumstances. This section deals with how the College operates; each student should know these requirements and regulations. The next section, "Courses of Instruction," describes the programs Allegheny offers.

Divisions

The academic departments and interdivisional programs of the College are classified in divisions as follows:

Humanities Departments and Programs

- Art
- Communication Arts
- Dance and Movement Studies
- English
- Jewish Studies
- Modern and Classical Languages (includes Arabic, Chinese, French, German, Latin, and Spanish)
- Music
- Philosophy and Religious Studies

Natural Science Departments and Programs

- Biochemistry
- Biology
- Chemistry
- Computer Science
- Geology

Academic Divisions

- Mathematics
- Neuroscience
- Physics

Social Science Departments

- Economics
- History
- Political Science
- Psychology

Interdivisional Programs

Interdivisional Majors:

- Community and Justice Studies
- Environmental Science
- Environmental Studies
- Global Health Studies
- International Studies
- Women's, Gender, and Sexuality Studies

In most cases; students who complete interdivisional majors may complete any minor to satisfy the college requirement that the major and minor be in different divisions; exceptions are noted in the program descriptions in this *Bulletin*.

Interdivisional Minors:

- Art and the Environment
- Black Studies
- Chinese Studies
- Classical Studies
- Community and Justice Studies
- Education Studies
- French Studies
- Global Health Studies
- Journalism in the Public Interest
- Latin American and Caribbean Studies
- Medieval and Renaissance Studies
- Middle East and North African Studies
- Women's, Gender, and Sexuality Studies

In most cases; students who complete interdivisional minors may complete any major to satisfy the college requirement that the major and minor be in different divisions; exceptions are noted in the program descriptions in this *Bulletin*.

Graduation Requirements

The Graduation Requirements are designed to provide all students with diverse learning opportunities, as well as with depth in more than one area. Every student must complete work in each division of the College. To receive a degree from Allegheny, students must complete the following requirements:

1. The First-Year/Sophomore Requirement
2. The Major Requirement
3. The Minor Requirement
4. The Distribution Requirements
5. The Junior Seminar Requirement
6. The Senior Project Requirement
7. The Credit Requirement
8. The Grade Requirement
9. The Residency Requirement

The First-Year/Sophomore (FS) Requirement

All students are required to take three FS courses in the first two years: FS 101, FS 102, and FS 201. The FS program encourages careful listening and reading, thoughtful speaking and writing, and reflective academic planning and self-exploration. These courses provide opportunities to develop communication and research skills useful for generating, exploring, defending, and challenging ideas. This background prepares students to succeed in the Junior Seminar and Senior Project that are required in the student's major. Taken together, the FS program, Junior Seminar, and Senior Project ensure that all Allegheny graduates are equipped to think critically and creatively, to communicate clearly and persuasively, and to meet challenges in a diverse, interconnected world.

The Major Requirement

All Allegheny students must complete a major (the "graduation major") consisting of a minimum of 40 semester credit hours of coursework in the major program, including the Junior Seminar and Senior Project. Students must achieve a minimum grade point average of 2.0 in the major.

Students may elect one or two majors. Students must fulfill all of the requirements for each program in which they elect a major (see "Double Majors" below). After consulting with their current advisors, students should select a major advisor and declare a major and minor by the end of the sophomore year. Students who have completed at least 48 semester credit hours will not be permitted to register for the next semester until they have declared a major and a minor. Appropriate forms may be obtained from the Office of the Registrar.

Majors Offered

Allegheny offers a total of 32 majors:

Humanities Majors

- Art: Art History
- Art: Art and Technology
- Art: Studio Art
- Communication (Communication Arts Department)
- English
- French (Modern and Classical Languages Department)
- German (Modern and Classical Languages Department)
- Music
- Philosophy
- Religious Studies
- Spanish (Modern and Classical Languages Department)
- Theatre (Communication Arts Department)

Natural Science Majors

- Applied Computing (Computer Science Department)
- Biochemistry
- Biology
- Chemistry
- Computer Science
- Environmental Geology (Geology Department)
- Geology
- Mathematics
- Neuroscience
- Physics

Social Science Majors

- Economics
- History
- Political Science
- Psychology

Interdivisional Majors

- Community and Justice Studies
- Environmental Science
- Environmental Studies
- Global Health Studies
- International Studies
- Women's, Gender, and Sexuality Studies

Double Majors

Students may elect one or two majors. Students must fulfill all of the requirements for each program in which they elect a major and must receive approval from *both* major advisors to register for classes. A student electing to complete two majors may choose to complete a single senior project that integrates both disciplines or two separate senior projects, one in each discipline. In the former case, the Senior Project must be evaluated by faculty from both programs. The degree awarded (B.S. or B.A.) corresponds to the major listed first on the student's major declaration.

A second major that is used to fulfill the College Minor Requirement must be in a different division from the graduation major. If the graduation major or second major is interdivisional, then in most cases the College Minor Requirement is satisfied. Students should consult specific descriptions of interdivisional majors to identify specific double major combinations that do not satisfy the College Minor Requirement.

The appropriate department chairpersons and a faculty advisor from each department must approve the double major. A decision regarding the type of Senior Project should be noted on the approval form when it is returned, even though changes may be made later with the approval of the departments and the individuals involved.

Student-Designed Majors

Students at Allegheny may design their own majors in cases where their academic, personal, and professional interests are not met by the combinations of majors and minors available in the standard curricula. The Self-Designed Major must embody the educational objectives of Allegheny College, match the rigor and scope of existing major programs, and be true to the vision of the Liberal Arts as intellectual, academic, and civic preparation for life. In conjunction with their advisors, students create a plan of study that reflects compelling intellectual connections among departments, allowing for the student to synthesize multiple bodies of knowledge. Students pursuing a Self-Designed Major must complete a Senior Project that functions as a culmination of the student's interdisciplinary study. The Senior Project must directly contribute to the student's expressed academic goals and must be evaluated by faculty from more than one department.

Graduation Requirements

Qualifying students who wish to propose a Self-Designed Major should do so using the forms available from the Registrar's Office. To submit a proposal, students must have a 3.0 semester GPA for the two semesters prior to the proposal submission and must submit their proposal by the end of the 7th week of their 5th semester at Allegheny College.

The student's proposal must clearly articulate the intellectual goals for the plan of study and must provide a compelling case for how the proposed major fulfills those goals in ways not otherwise available through either double majors or other major/minor combinations. The major must include a minimum of 50 semester credit hours. The proposal must address how each course (including the Junior Seminar and potential study abroad, internship, or independent study opportunities) is integrated to create a coherent and viable program of study. The proposal must specifically address a prospective Senior Project in sufficient detail to demonstrate its viability as a capstone project for the major, though the College recognizes that the eventual Senior Project may differ from that described in the proposal as the student's understanding of the major field develops. The program must show a progression to higher-level courses and include significant work at the 300- and 400-level. A self-designed major may not count more than 4 credits of internship or independent study, or more than 16 credits of transfer credit (e.g. from a study abroad program) towards the 50 credit requirement.

A self-designed major requires a great deal of care in its design. The primary responsibility for the proposal rests with the student. Faculty are critical to the student's success, however, particularly in the planning and development stages. All proposals for Self-Designed Majors must be accompanied by a faculty evaluation letter from the advisors for the proposed major that assesses the intellectual and academic cohesiveness of the proposed plan of study as well as its commensurability with the goals of a Liberal Arts education.

The complete proposal will be evaluated by the Curriculum Committee, which will ultimately grant or deny permission based on the quality of the proposal and the academic viability of the plan of study. Any subsequent changes to the program must be approved by the Curriculum Committee.

The Minor Requirement

All Allegheny students must complete a minor (the "graduation minor") consisting of at least 20 credits of coursework. The graduation minor must be in a different division from the graduation major. If the graduation major or minor is interdivisional, then in most cases the requirement that the major and minor be in different divisions is satisfied by taking any other minor/major. Students should consult specific descriptions of interdivisional majors and minors to identify specific major/minor combinations that do not satisfy the College Minor Requirement. Students must achieve a minimum grade point average of 2.0 in the minor.

The minor requirement can also be satisfied by a second major. A second major that is used to fulfill the College Minor Requirement must be in a different division from the graduation major. If the graduation major or second major is interdivisional, then in most cases the College Minor Requirement is satisfied. Students should consult specific descriptions of interdivisional majors to identify specific double major combinations that do not satisfy the College Minor Requirement.

Students may elect at most two minors. Students must fulfill all of the requirements for each program in which they elect a minor. For every minor completed, students must complete at least 8 credits towards that minor in residence at Allegheny College. Departments and programs reserve the right to determine the eligibility for inclusion in their minor requirements of all transfer credits, including those earned during study away experiences, and may require students to take some advanced work on campus.

Forms for declaring a minor may be obtained from the Office of the Registrar.

Humanities Minors

- Art: Art History
- Art: Studio Art
- Chinese (Modern and Classical Languages Department)
- Communication (Communication Arts Department)
- Dance and Movement Studies
- English

Graduation Requirements

- Environmental Writing (English Department)
- French (Modern and Classical Languages Department)
- German (Modern and Classical Languages Department)
- Jewish Studies
- Latin (Modern and Classical Languages Department)
- Music
- Philosophy
- Religious Studies
- Spanish (Modern and Classical Languages Department)
- Theatre (Communication Arts Department)
- Writing (English Department)

Natural Science Minors

- Astronomy (Physics Department)
- Biology
- Chemistry
- Computer Science
- Geology
- Mathematics
- Physics

Social Science Minors

- Economics
- History
- Political Science
- Psychology

Interdivisional Minors

- Art and the Environment
- Black Studies
- Chinese Studies
- Classical Studies
- Community and Justice Studies
- Education Studies
- French Studies
- Global Health Studies
- Journalism in the Public Interest
- Latin American and Caribbean Studies
- Medieval and Renaissance Studies
- Middle East and North African Studies
- Women's, Gender, and Sexuality Studies

Student-Designed Minors

A student may propose a Self-Designed Minor outside of the existing departmental and interdisciplinary minors. A Self-Designed Minor must be comparable in academic rigor and integrity to a conventional minor, must offer sufficient depth of study, and cannot be a subset of an existing minor. A minimum of 24 semester credit hours is required. A minor must include coursework at or above the 300-level not including independent study or internship credit. No more than 4 credits of transfer and independent study credit can be applied to the minor. Students who wish to propose a self-designed minor should do so no later than the end of their 6th semester at Allegheny by using the form available from the Registrar's Office.

Students who wish to propose a Self-Designed Minor must include a written rationale that clearly articulates the intellectual goals for the plan of study and provides a compelling case for how the proposed minor fulfills those goals in

ways not otherwise available through existing programs of study. The proposal must briefly address how each course (including potential study abroad, internship, or independent study opportunities if appropriate) is integrated to create a coherent and viable program of study. The proposal must be approved by 1) two faculty members with expertise in the proposed area of study, who will serve as the advisors for the minor, and 2) the Curriculum Committee.

The Distribution Requirements

All Allegheny students must successfully complete at least one course (four semester credit hours) in each of the areas of inquiry covered by the eight Distribution Requirements listed below. The Distribution Requirements fulfilled by a specific course are indicated in the course description using the two-letter codes shown below. An individual course may fulfill zero, one, or two of the Distribution Requirements, i.e., a single course may satisfy at most two of the Distribution Requirements. Courses presented in fulfillment of the Distribution Requirements must be taken for a letter grade. Courses that meet these requirements may also be counted toward major or minor requirements. However, FS courses (FS 101, 102, and 201), Junior Seminars, and Senior Projects may *not* be used to fulfill the Distribution Requirements.

Please note that these Distribution Requirements apply *only* to students who matriculated in or after Fall 2016. Students who matriculated before Fall 2016 are subject to the Distribution Requirement as described in previous editions of the *Academic Bulletin* or *College Catalogue*; the old Distribution Requirement is also summarized below under the heading “Distribution Requirement for Students Who Matriculated Before Fall, 2016.”

Distribution Requirements (Instituted Fall, 2016)

1. **Civic Learning (CL):** Civic Learning develops the political, ethical, and social capacities citizens need to address the challenges facing local, regional, national, and international communities through community engagement and/or through the cultivation of civic knowledge, skills, motivations, and behaviors.
 - *Learning Outcome: Students who successfully complete this requirement will demonstrate an understanding of economic, political, legal, cultural, natural, historical, or social forces that affect public problems or civic issues.*
2. **Human Experience (HE):** The study of Human Experience explores human physical, mental, emotional, and/or spiritual experiences as conveyed in texts broadly defined. Through engagement with such texts, students develop an appreciation for human experiences and their representations.
 - *Learning Outcome: Students who successfully complete this requirement will demonstrate an understanding of how to interpret human experiences as conveyed in texts (including works of visual and performance art, rituals, cultural artifacts and traditions, and/or the written and spoken word).*
3. **International and Intercultural Perspectives (IP):** An understanding of *International and Intercultural Perspectives* means awareness that culture provides the interpretive lens for action in the world, and that one’s particular culture is itself one of many cultures of the world. It includes the ability to recognize and understand the results of cultural difference wherever they are found, as well as an awareness of the norms of one’s own culture or those of other cultures.
 - *Learning Outcome: Students who successfully complete this requirement will demonstrate an understanding of cultural complexity and difference.*
4. **Modes of Expression (ME):** The study of Modes of Expression explores individual and/or collective modes of expression, focusing upon the ways in which these modes create meaning and communicate thoughts, emotions, or beliefs to others. By engaging in hands-on experience, students interrogate the act of communication itself.
 - *Learning Outcome: Students who successfully complete this requirement will demonstrate an understanding of the production of meaning through active engagement with language, visual arts, and/or performance.*
5. **Power, Privilege, and Difference (PD):** Understanding Power, Privilege, and Difference means understanding the role of power, privilege, prejudice, discrimination, stereotypes, inequity, and oppression in human society, in both historical and contemporary contexts, and recognizing these dynamics in the learner’s own life and communities.
 - *Learning Outcome: Students who successfully complete this requirement will demonstrate an understanding of the historical and/or contemporary roles of power, privilege, and difference in human society.*
6. **Quantitative Reasoning (QR):** Quantitative Reasoning is the ability to understand, investigate, communicate, and contextualize numerical, symbolic, and graphical information towards the exploration of natural, physical, behavioral, or social phenomena.

- *Learning Outcome: Students who successfully complete this requirement will demonstrate an understanding of how to interpret numeric data and/or their graphical or symbolic representations.*
7. **Scientific Process and Knowledge (SP):** Courses involving Scientific Process and Knowledge aim to convey an understanding of what is known or can be known about the natural world; apply scientific reasoning towards the analysis and synthesis of scientific information; and create scientifically literate citizens who can engage productively in problem solving.
- *Learning Outcome: Students who successfully complete this requirement will demonstrate an understanding of the nature, approaches, and domain of scientific inquiry.*
8. **Social Behavior and Institutions (SB):** The study of Social Behavior and Institutions encompasses a broad range of disciplines that use a variety of methodologies to describe, explain, or predict human behavior, social processes, and institutional structures as they interact with their environments.
- *Learning Outcome: Students who successfully complete this requirement will demonstrate an understanding of at least one methodology used to describe, explain, or predict human behavior at the level of the individual, small group, institution, organization, community, or population.*

Distribution Requirement for Students Who Matriculated Before Fall, 2016

Any student who matriculated prior to the Fall, 2016, semester must complete the Distribution Requirement in force at the time of matriculation, viz., at least two courses (eight semester credit hours) in each of the three divisions of the college, including at least one laboratory course (four semester credit hours) in the natural sciences. Students majoring or minoring in Mathematics are exempted from the requirement that one of the natural science courses be a laboratory course but must satisfy the Distribution Requirement in all other respects. Students should be aware that MATH 159 (Pre-calculus) *does not count* toward the pre-2016 Distribution Requirement. In addition, most courses offered in interdivisional programs are considered outside of all three divisions and do not count towards the pre-2016 College distribution requirement; exceptions are noted in the information for specific courses in this *Bulletin*

The Junior Seminar Requirement

All students must complete a Junior Seminar, which forms a bridge between the FS sequence and the Senior Project. These seminars develop the student's ability to engage in advanced scholarship and communication in a discipline and are typically taken in the junior year or first semester of the senior year. Although the structure and timing of the Junior Seminar vary among programs, the course typically emphasizes methods of scholarship, the process of independent inquiry, and oral, written, and/or other (e.g., visual) communication skills.

The Senior Project Requirement

All students must complete a Senior Project in their majors. A student completing two majors may submit one Senior Project that integrates both disciplines and is evaluated jointly by faculty from both programs, or two separate Senior Projects, one in each program. In all cases, the Senior Project must satisfy the standards of evaluation in each department. Students completing integrated Senior Projects should work closely with faculty from both programs.

Since the College's first commencement in 1821, Allegheny students have showcased their exceptional academic achievements through a senior capstone experience of one kind or another. At times it involved an oral defense, at others a written thesis. The notion of a written Senior Project coupled with a comprehensive oral examination first appeared in the 1942 *College Catalogue*. In the 1970s, oral examinations shifted from a general defense of disciplinary expertise to a more focused verbal presentation of the Senior Project findings.

In keeping with Allegheny's commitment to provide students with a liberal arts education of high standards, the Senior Project is not a mere report or semester paper, but a significant piece of independent study, research or creative work conducted under the supervision of one or more faculty members. The outcome of a Senior Project is more than a grade or a written document; for the student it often results in a new way of looking at complex problems and inspires an appreciation for the power of ideas that might previously have seemed like abstract concepts in a textbook. Often it can be a pivotal moment where a student realizes his or her own abilities and potential.

The Senior Project provides students with an opportunity to integrate discipline-specific scholarship with the communication and research skills necessary for professionals in the 21st century. During their first year at Allegheny,

Graduation Requirements

students write, speak, and research frequently in their first-year seminars. By the sophomore year, they are ready to undertake the complexities of writing and speaking in a specific discipline. They further hone these disciplinary communication skills in a junior seminar, the final preparatory phase for the Senior Project. By the senior year they are sufficiently prepared to undertake a scholarly endeavor approximating those experiences they will face as professionals in their field.

The culminating experiences of the Senior Project are as varied as the disciplines that produce them, from recitals, performances, and exhibits to written and oral presentations on laboratory research. Many departments provide open forums for seniors to present their projects, allowing students to refine their skills in presenting discipline-specific information to a broad audience and providing a model for the communication skills required of informed professionals in a global society.

Principles Regarding Research

All regular academic courses, all independent study courses including senior projects, and all internships involving research with human participants will be conducted in an ethical manner. Proposals for study will be reviewed in advance by appropriate departmental and/or College review boards to ensure that this will be the case. In all instances the health, safety, and welfare of the individuals involved will be protected. Participation in such research or classroom projects will be by informed and voluntary consent, in accordance with accepted and appropriate general and disciplinary research guidelines. All research subjects will be given full clarification of the nature of the study. The laws of the nation, state, and community will be respected, and care will be taken that interpersonal relationships within the College community are not abused.

The Credit Requirement

Each student must successfully complete 128 semester credit hours. These shall include courses taken to meet the first-year/sophomore requirement, the major requirement, the minor requirement, the distribution requirement, and the Senior Project requirement, as well as elective courses.

The Grade Requirement

A cumulative grade point average of at least 2.0 is required for graduation from the College. Descriptions of the grading system and the academic standing requirements can be found in the sections “Academic Regulations and Policies” and “Academic Standing.”

The Residency Requirement

The residency requirement is satisfied upon completion of 64 semester credit hours “in residence.” Of these, a student’s final 16 semester credit hours before graduation must be taken in residence. Work in residence is undertaken through registration at Allegheny and supervision by Allegheny faculty, who evaluate the student’s performance. Students are not required to live on campus or in Meadville to satisfy the residency requirement.

Curricular Options

American Honors Program

Allegheny College is a partner with the American Honors program that facilitates the transfer of students from a selected group of outstanding community colleges to complete their bachelor's degrees at Allegheny. American Honors advisors assist students in selecting community college courses that will prepare them for the rigor and the specific requirements of their intended programs at Allegheny. Interested students are encouraged to contact American Honors (<https://americanhonors.org/>) or Allegheny Admissions (admissions@allegheny.edu) for more information.

Internships

Undergraduate internships are available through academic departments for students with appropriate backgrounds. These internships are designed to serve two major purposes: first, to provide an opportunity for study and experience outside the traditional setting of classroom and laboratory, yet within the framework of disciplined inquiry; and second, to provide a special opportunity for the participants to refine their emerging professional/career interests. Some established internships are briefly described under sponsoring departments. Interested students should contact the listed faculty liaison for more information; not all internships are available each semester.

Registration for internships should be completed prior to participation in the internship; see Internship Registration under "Academic Regulations and Policies" for details. In order for an internship to be credit-bearing and, thus, listed on a student's academic transcript, it must require a level of work comparable to a regular Allegheny course with the same number of credit hours. In particular, such an experience must involve academic research, regular reflection, and a final project or presentation evaluated by the supervising Allegheny faculty member.

Study Away Programs

Allegheny recognizes the enormous value of off-campus study and is proud to offer a variety of programs and services to its students in order to facilitate participation in such opportunities. Allegheny students have studied in almost every corner of the world through programs that lasted only two weeks to programs that lasted almost a year. Detailed information regarding all off-campus study programs is available from the International Education Office in the Allegheny Gateway.

Allegheny-Sponsored Programs

The term "Allegheny-sponsored program" indicates that Allegheny participants in these programs are charged Allegheny rates for program costs, and Allegheny financial aid, with the exception of work-study, can be applied to program costs. The program fee always includes Allegheny tuition; if the program fee includes room and board, students will be charged Allegheny room and board rates (the room charge is the double room rate, and the meal plan charge is for the Complete Plan). Depending on the program, students may pay room and board charges directly to the host institution.

International Programs

- **Al Akhawayn University in Ifrane, Morocco**
Al Akhawayn is Morocco's first English-language international university based on the American model. The spacious modern campus is located in an immense natural forest above Ifrane, in the heart of Morocco's beautiful Middle Atlas mountains. Students select from a wide variety of courses taught in English as well as courses in the Arabic language.
- **Allegheny-in-Cologne, Germany** (fall semester only)
Students and faculty from Gettysburg College and Washington and Jefferson College join Allegheny students and faculty in this language and area studies program; college level German required; students live with host families.
- **Arava Institute for Environmental Studies at Kibbutz Ketura, Israel**
Students from an array of Middle Eastern countries study and work together; program taught in English focuses on environmental issues, including ecology, conservation, technology, politics, religion, art, psychology and economics.

- **Boston University, Paris Internship Program, France**
Program students take French area studies courses together for seven weeks, then engage in internships related to their major for seven weeks; college level French required.
- **CIEE Study Center at FLACSO in Buenos Aires, Argentina**
In this program, students take specialized courses at FLACSO in a variety of disciplines taught by experts in various academic fields and taught exclusively to CIEE students. In addition, students are required to enroll in direct enrollment courses within academic departments and faculties at the Universidad de Buenos Aires (UBA), the Pontificia Universidad Catolica Argentina (UCA), and the Instituto Universitario Nacional de Arte (IUNA). This arrangement allows CIEE students to combine the specialized, more personalized “think tank” atmosphere of FLACSO with the vibrant and challenging Argentine university life of UBA, UCA, and IUNA. Given the acknowledged excellence of the faculty and the wide range of course offerings, the CIEE program is suitable for students with very strong language skills. All courses are taught in Spanish.
- **CIEE Intensive Chinese Language Program in Beijing, China**
Students engage in intensive study of the Chinese language along with cultural excursion and extracurricular activities.
- **CIEE Chinese Language and Culture Program in Nanjing, China**
This program combines study of the Chinese language with cultural immersion experiences, field trips, and community involvement. Students improve their language proficiency while also developing cross-cultural competence.
- **CIEE Chinese Business, Language, and Culture Program in Shanghai, China**
Suitable for students with no previous background in the Chinese language, this program offers course options in Chinese language, economics, and political science and also includes visits to Chinese companies and an internship placement.
- **CIEE at the Monteverde Tropical Biology Institute, Costa Rica**
Program students engage in a structured curriculum and field experiences taught in English centered around tropical biology and ecology.
- **ITESM, Campus Querétaro, Mexico**
Students may enroll in language and area studies courses for foreign students or regular university courses in some majors offered at Allegheny; college level Spanish required; students live with host families.
- **James Cook University, Townsville, Australia**
Students enroll in regular university courses in all majors at Allegheny; housing is in on-campus residence halls.
- **Keio University in Tokyo, Japan**
Two different study tracks are available at the International Center at Keio University. Accepted students can choose to enroll in either the Keio University International Program or the Japanese Language Program. The Keio International program offers core courses taught in English in combination with Japanese Language courses intended to improve students’ speaking, listening, reading and writing skills. The Japanese Language Program is intended for those students interested in developing or improving their Japanese language skills while learning more about the society and culture of Japan.
- **Lancaster University, Lancaster, England**
Students enroll in regular university courses in all majors at Allegheny; housing is in on-campus residence halls.
- **L’Université Catholique de l’Ouest in Angers, France**
Program students may take intensive language courses, or enroll in both area studies courses for foreign students and/or regular university courses in some majors offered at Allegheny; college level French required; students live with host families.
- **Center for Sustainable Development (SFS), Costa Rica**
Program students live and work together; courses taught in English focus on ecological, social, and political aspects of sustainable development; one semester of Spanish required.
- **Minnesota Studies in International Development**
Field placement/internship programs in Quito (Ecuador), Jaipur (India), Nairobi (Kenya), Dakar (Senegal); program students enroll in language, area studies, international development courses for eight weeks, then participate in eight week (or additional semester) internships in grassroots organizations, local government, or field stations.
- **Spanish Studies Abroad in Seville, Spain**
Program students take area studies and language courses together; meet Spanish university students through translation program; college level Spanish required; students live with host families.

- **University of Cologne, Cologne, Germany**

Participants take intensive German language courses at the start of the program, then enroll in area studies for foreign students and/or regular university courses in most majors offered at Allegheny. Students live on campus in shared apartments with other students.

National Programs

- **Duke University Marine Lab, Beaufort, North Carolina**

Through Allegheny's membership in Duke University's Marine Sciences Education Consortium (MSEC), juniors may spend fall semester at the Beaufort marine station and/or participate in the spring program split between Beaufort and the Bermuda Biological Laboratory. The major designation on student transcripts will be annotated "with an emphasis in the Marine Sciences" upon completion of at least 16 semester hours of coursework at Duke.

- **The Philadelphia Center**

This program is a unique and valuable 16-week program in the fall or spring semester that allows undergraduates to engage in critical investigations of their own abilities, objectives, and values in order to help discover their personal and professional direction in life. It combines city living seminars, academic electives, and internships

- **The NY Arts Program**

This program has two main goals: to provide advanced experience and knowledge in highly focused arts areas (primarily through apprenticeships) and to provide a broadened knowledge of all the arts as practiced in New York through the Area Studies program. It is a unique combination of seminars and internships based on the Visual, Performing, and Media Arts.

- **Oakridge Science Semester**

This is a Fall semester only program running from late August until Mid-December. The Oak Ridge Science Semester (ORSS) enables students to join ongoing investigations at the Oak Ridge National Laboratory (ORNL) in research areas as diverse as astrophysics, cell biology, DNA sequencing, genetic mutagenesis, parallel computing, robotics, toxicology, and much more.

- **Washington Semester at American University, Washington, D.C.**

Program students enroll in one of 12 tracks (e.g., politics, justice, law, journalism, economics) and also complete an internship relating to their academic focus.

- **Woods Hole Marine Biological Laboratory, Massachusetts**

Intensive studies in terrestrial and aquatic ecosystems in a premier research institution.

Off-Campus Study: Independent Programs

Students participating in "independent programs" will pay program costs (e.g., tuition) directly to the program in which they are participating. Allegheny financial aid is not applicable to independent programs; however, most state and federal aid may be applied. Students going on independent programs are responsible for notifying the Office of Financial Aid in order to make arrangements for the transfer of state and federal aid (e.g., student loans).

Each student who participates in an independent off-campus program will pay an \$800 off-campus study fee per semester.

Application Process

The application process for fall and spring semester programs is as follows:

1) Allegheny approval

All students interested in off-campus study must file for approval by September 20 for the following spring and February 20 for the following fall. In order to be approved for off-campus study, the students must submit a letter of approval for program participation from their academic advisor, an application (including an essay closely relating the program of choice to the student's major, minor or other academic goals), resumé, and unofficial transcripts. They must also meet specific program eligibility requirements and meet the filing deadline.

2) Pre-departure orientations

ALL students approved for off-campus study (national and international programs, Allegheny-sponsored and independent) must attend the pre-departure orientation meetings. Program applications are distributed, and information about issues such as credit transfer, travel, safety and responsibility, program goals, and cross-cultural learning is discussed.

3) EXL 300 Cross-Cultural Learning: Theory and Practice

Students on Allegheny-sponsored programs are required to enroll in EXL 300 *Cross-Cultural Learning: Theory and Practice*, a one-credit course that comprises activities, readings, and assignments that are completed for the meetings prior to departure and upon return to campus. The focus of the course is cross-cultural learning and communication.

EL Seminars

Allegheny also offers faculty-led summer programs. These are generally three-week, for-credit courses that take place both domestically and internationally. The seminars offered during summer 2016 included destinations such as Central Europe, Nicaragua, Peru, the Rocky Mountains (U.S.), and Sri Lanka. Summer 2017 seminars will be announced in September 2016. Students must be approved by the faculty leaders and the International Education Office in order to participate. The application deadline is December 1. Detailed information is available from the International Education Office in the Allegheny Gateway: <http://sites.allegheny.edu/elseminars/>.

Cooperative Programs

Cooperative programs (sometimes called 3-3, 3-2, or 3-1 programs) with other educational institutions enable Allegheny students to acquire a solid liberal arts background while accelerating their progress toward professional training and certification. Allegheny has formal agreements with several institutions to offer cooperative programs in Allied Health Professions, Engineering, and Public Policy and Management. Most of these require the successful completion of 98 semester credit hours at Allegheny before beginning course work at the cooperating institution. Students who want to participate in cooperative programs must complete Allegheny's Graduation Requirements, including the minor outside the division of the major and the courses identified for an approved major; however, students who begin the cooperative program after three years of study at Allegheny are exempted from the requirement to complete a Senior Project. There are additional specific departmental course requirements for cooperative programs, and students should consult with the appropriate program liaison person about them when planning their course of study.

Satisfactory completion of the stated Allegheny requirements and the cooperating institution's requirements earns the student the bachelor's degree from Allegheny and the specified degree or certification from the cooperating institution.

A student enrolling in a cooperative program will be assessed a maintenance fee payable to Allegheny for each year in which the student is enrolled at a cooperating institution. This fee, payable before final processing of the application can be completed, is \$50 for two years at a cooperating institution, or \$25 for one year. The maintenance fee helps offset the costs of special record maintenance, correspondence, and transfer credit.

Students who elect to complete any of the programs that involve three years of work at Allegheny and additional years at a cooperating institution should schedule an exit interview with the Director of International Education early in their final semester at Allegheny. During the interview, the student will file an exit agreement in which the cooperating institution and the expected date of graduation are specified. Because work at the cooperating institution is evaluated as transfer credit, official transcripts showing that the student's work at the second institution has been satisfactory must be received before the Allegheny degree is awarded.

The cooperative programs approved by the faculty are outlined below by interest area. Please contact the appropriate faculty advisor for information about the interest areas listed below.

Allied Health Professions

The following cooperative programs are available:

- Nursing (3+3, 3+4) with the Frances Payne Bolton School of Nursing of Case Western Reserve University
- Occupational Therapy (3+2) with Chatham University
- Physical Therapy (4+2) with Chatham University
- Physician Assistant Studies (3+2) with Chatham University

Curricular Options

In all cases, students complete at least their first three years at Allegheny. In the case of physical therapy the degree is DPT and the undergraduate degree (including the Senior Project) must be completed prior to starting graduate studies.

Admission to all of the programs is competitive, and the existence of a cooperative agreement does not guarantee admission. The programs with Chatham University have specific criteria for guaranteed admission and guaranteed interview. Students are encouraged to see the Director of Pre-Professional Studies for these details as well as for the forms required of all students planning a cooperative program.

Students must complete the standard requirements of a major, a minor, FS courses, and distribution courses in order to obtain the Allegheny degree. Certain combinations of majors and minor work especially well to satisfy both Allegheny requirements and the prerequisite course work for the graduate program. Students are encouraged to consult with the Director of Pre-Professional Studies in their first year for this information. Careful planning is critical to success in these programs.

Engineering

Five engineering programs entail three years at Allegheny and further study—usually two years—at a cooperating institution. At the conclusion of study, the student receives a bachelor's degree from Allegheny and a Bachelor of Science in Engineering degree from the cooperating institution. Programs have been arranged with the following institutions:

- Columbia University School of Engineering and Applied Science
- Case Institute of Technology at Case Western Reserve University
- University of Pittsburgh School of Engineering
- Washington University School of Engineering

Most programs require that students maintain a “B” average overall and in the sciences. For these universities, acceptance to the cooperating institution is contingent upon the recommendation of the student's major department at Allegheny. For some of the engineering departments, enrollment is limited by the engineering school. Similar arrangements may be made with engineering programs at other institutions with the approval of the faculty.

An alternative cooperative program with Columbia provides for earning the bachelor's degree at Allegheny in the usual four years and the Master of Science in Engineering degree after two additional years at Columbia. This program requires substantial academic performance in Allegheny coursework and is available in most engineering fields. Students should consult with the advisor in their major field and with Professor Willey of the Physics Department for specific program requirements.

Public Policy and Management

The H. John Heinz III School of Public Policy and Management at Carnegie Mellon University offers an accelerated master's program to qualified Allegheny College students. The program, structured as three years at Allegheny College followed by three to four semesters at the Heinz School (depending upon program), allows students to earn both a bachelor's and a master's degree in less time than is normally required.

The following cooperative programs are available:

- Master of Science in Public Policy and Management (MSPPM)
- Master of Science in Health Care Policy and Management (MSHCPM)
- Master of Arts Management (MAM)
- Master of Entertainment Industry Management (MEIM)
- Master of Information Systems Management (MISM)
- Master of Science in Information Security Policy & Management (MSISPM)

Students pay tuition and fees to Allegheny College from their freshman through junior years. They pay tuition and fees to Carnegie Mellon for their graduate program, either three or four semesters beyond the completion of the junior year, depending upon program. Allegheny students are also responsible for paying a maintenance fee to Allegheny while enrolled at Carnegie Mellon in their senior year.

Students will receive both the bachelor's and master's degrees upon completion of their graduate program at Carnegie Mellon. Allegheny College will count units taken during the master's program toward the student's bachelor's degree according to its policies and procedures. The Heinz School will forward to Allegheny College transcripts and other necessary information on student academic performance. Students should consult with the advisor in their major field and with Professor Onyeiwu of the Economics Department for specific program requirements.

Allegheny College students are eligible for scholarship support from Allegheny College for their freshman through junior years. They will be eligible for scholarship support from the Heinz School for the length of their graduate program and can apply for any and all Heinz School scholarship funds for which they are eligible (based on program and the individual scholarship fund's specific requirements).

Pre-Professional Programs and Advising

Pre-Health Professions

Allegheny students preparing for graduate programs in the health professions—medicine, dentistry, veterinary medicine, and allied health fields—use their major and elective courses to create precisely the programmatic balance that professional schools seek out, and that leads to success in professional school itself. Elements of such a program include: a strong foundation in the natural sciences (in or outside the selected major), highly developed communication skills, a solid background in the humanities and social sciences, study in depth (in any major field that is personally stimulating), and independent study and research (including the Senior Project).

Guidance in considering career options and preparing for professional school is just as important to undergraduates as the strength of the courses available. Consequently, Allegheny maintains an active Health Professions Advisory Committee, headed by the Director of Pre-Professional Studies. This advisor functions in addition to the student's academic advisor and focuses specifically on pre-health concerns. Advising begins in the first year to assure that students are taking the appropriate courses in a timely fashion and are maintaining appropriate grades.

The Committee assists students with applying to professional schools through workshops, test preparations and interviews. A Committee Letter of Recommendation supplements the recommendations received from individual faculty members, and it carries special weight. Other Committee services include assistance in exploring the health professions through internships, externships, guest lectures, and campus visits by representatives of health professions schools.

Further information about the pre-health professions program is available from the Director of Pre-Professional Studies in the Allegheny Gateway and online at: <http://sites.allegheny.edu/health/>.

Drexel University College of Medicine Affiliation

Each year up to two Allegheny students are offered early assurance of admission to Drexel University College of Medicine if they meet certain criteria. These criteria include a GPA of 3.5 or better (with no grade less than a "C") and the recommendation of the Health Professions Advisory Committee. The required MCAT scores will depend on the version of the test that is taken. Under the new scoring system the candidate must achieve a total minimum score of 506, with minimum subscores of 127 in the Chemical/Physical, Biological/Biochemical, and Critical Analysis sections of the test, and a minimum of 125 in the Foundations of Behavior section. Candidates who qualify will interview at the College of Medicine in June and gain early acceptance. Qualified students are encouraged to have early contact with the medical school and should see the Director of Pre-Professional Studies for further details.

Jefferson Medical College Affiliation

Under the Physicians Shortage Area Program (PSAP), certain Allegheny students who intend to practice in underserved rural areas may qualify for preferential admission to Jefferson Medical College in Philadelphia, as well as special premedical advising from Jefferson faculty. Qualifying students have rural or small-town backgrounds or family ties and intend to practice in non-metropolitan areas, preferably in Pennsylvania. Allegheny is one of six Pennsylvania colleges and universities whose students are afforded special consideration as PSAP applicants, of whom a maximum of 24 are admitted to the program each year.

Lake Erie College of Osteopathic Medicine (LECOM) Affiliation

Early assurance programs are offered with LECOM in medicine, dentistry and pharmacy for students meeting the criteria. Viable candidates for the medical school program must have an overall GPA of at least 3.4 and a science GPA of at least a 3.2. The MCAT may be waived if certain academic criteria are met. Applicants must: interview at LECOM; have completed the pre-requisite courses; and have the support of the Health Professions Advisory Committee. Qualified candidates should meet with the Health Professions Advisor for further details.

Philadelphia College of Osteopathic Medicine (PCOM) Affiliation

Each year up to three students are offered admittance to PCOM provided they meet certain criteria. These criteria include completion of the course requirements listed in the PCOM catalog, an overall GPA of at least 3.25, a minimum of fiftieth percentile scores in each section of the MCAT, and support of the Health Professions Advisory Committee. Applicants must interview at PCOM and are encouraged to submit their application as early as possible in the application cycle. Qualified candidates should meet with the Health Professions Advisor for further details.

Cooperative Programs in Health Professions

Cooperative programs with other educational institutions enable Allegheny students to acquire a solid liberal arts background while accelerating their progress toward professional training and certification. Allegheny has formal agreements with several institutions to offer cooperative programs in Physical Therapy, Nursing, Occupational Therapy, and Physician Assistant Studies. Please see the “Cooperative Programs” section for details.

Pre-Legal Studies

Allegheny students preparing for law school receive advice, information, and guidance from two Pre-Law Advisors (one a faculty member, the other a career services professional). The advisors sponsor programs, speakers and trips pertaining to legal careers and graduate study, and they assist in arranging internships as well as job shadowing opportunities. Annually, the advisors provide an information session on the Law School Admission Test (administered on campus two times per year) and help with the law school application process.

Allegheny’s curriculum is especially well suited to preparation for law school. Students may design the sort of broad-based program recommended by law schools themselves, with these crucial outcomes: ability to handle abstract ideas; strong analytic and reasoning skills; writing and speaking ability; and appreciation of the values of civilization. Especially important are the breadth of understanding and thinking skills developed in the First-Year/ Sophomore Seminars, the skills for in-depth study developed in the major of the student’s choice, and the capacities developed by the Senior Project, such as reasoning and expository skills and the ability to work independently.

Approximately two-thirds of Allegheny’s pre-law students major in one of three disciplines: Political Science, History or English. Next in popularity are Psychology and Economics, with other majors distributed evenly among the natural and social sciences and the humanities. Law school admissions committees encourage undergraduates to major in a discipline that interests and excites them.

Further information about the pre-law program is available from the Pre-Legal Advisor in the Gateway, Kristin Mook; from the faculty Pre-Legal Advisor, Professor Brian Harward of the Political Science Department, and online at: <http://sites.allegheny.edu/prelaw/>.

Business Administration

Allegheny has a direct admissions agreement with the William E. Simon Graduate School of Business Administration at the University of Rochester. Under this agreement, the Simon School gives selected Allegheny students preferred admission to the graduate school. Students are normally selected by the end of their junior year for admission the year following graduation.

Teacher Preparation

Allegheny students interested in pursuing a career in education can earn teacher certification and a Master of Arts in Teaching (MAT) degree through one of Allegheny’s partner institutions, Columbia University Teachers College or the University of Pittsburgh. Students may also earn an MEd through our partnership with the University of Pittsburgh and

Curricular Options

Xavier University. Under each program, students complete four years at Allegheny with a major and a minor in academic disciplines and then complete their teacher preparation at the graduate level in a streamlined program at one of the partner institutions. Applicants to the programs must maintain a 3.0 overall grade point average and meet the admission requirements of each graduate school.

Students who are interested in these programs should contact the Director of Pre-Professional Studies in the Gateway early in their academic careers in order to coordinate their Allegheny coursework with the partner institutions' requirements. More information about teacher preparation and Allegheny's Education Studies minor is available online at: <http://sites.allegheny.edu/education/>.

Academic Resources—The Learning Commons

The Maytum Learning Commons, located in Pelletier Library, houses academic support and advising services to create a “one-stop shop” for all students. It is dedicated to helping students thrive at all stages of their college careers.

The Learning Commons’ professional staff consult individually with students on study strategies such as time management, effective reading, and test taking; facilitate summer entrance advising; support the academic advising program with four-year course planning and help declaring a major/minor; and arrange accommodations for students with disabilities. Trained peer consultants assist students with writing, public speaking, and study in a variety of academic subjects.

For more information about the Learning Commons, to pick up a tutoring schedule, or to make an appointment, stop by in person, call 814-332-2898, or visit the Learning Commons Website: <http://sites.allegheny.edu/learningcommons/>.

Academic Regulations and Policies

The Semester Calendar

Allegheny divides the academic year into two semesters of 15 weeks each. A month-long break, beginning in late December, separates the semesters. Vacations occur during October, over Thanksgiving, and in March.

During semesters, classes typically meet two or three times per week for periods of 75 or 50 minutes, respectively. Associated laboratories are usually scheduled separately, although they may be scheduled at the regular class time if appropriate. Prior to registration, information about class times and examination periods for all courses to be offered is made available electronically to all students via *WebAdvisor*.

The Credit System

Most courses receive four semester credit hours, and, for a student enrolled for the usual full-time courseload of 16 credits, four-credit courses are designed to require no more than one-fourth of the time devoted by the student to academics. Some courses may receive one, two, or three semester credit hours.

Course Load

The usual academic load is 16 semester credit hours in each semester and 32 semester hours for the academic year. Students may take up to 20 semester hours per semester without special permission.

Class Standing

A student is considered to be a first-year student from the date of matriculation until the semester following completion of the 28th semester hour, when the student becomes a sophomore. A student becomes a junior in the semester following completion of the 60th semester hour, and a senior in the semester following completion of the 92nd semester hour.

Final Examinations

The schedule of final examinations for the ensuing academic year is published in advance by the Registrar at: <http://sites.allegheny.edu/registrar/academic-calendars/>. All students are expected to take their final examinations during the officially scheduled period. Students are required to arrange their travel and vacation plans to allow them to be present for all of their scheduled exams. Requests for changes in examination times should only be made in the following situations:

1. The student has three exams scheduled for the same day;
2. The student has a documented disability for which the appropriate accommodation necessitates a change in exam time;
3. Under extraordinary extenuating circumstances.

Students with a documented disability are encouraged to discuss any accommodations to which they are entitled with the course instructor early in the semester. If the need arises to request taking the final examination at a time other than that indicated in the Academic Schedule, students must receive approval from the course instructor and the chairperson of the department in which the student is requesting the time exception. Special examinations shall only be given after careful consideration of the circumstances presented by the student. All requests for exam changes should be made prior to the last week of classes. Requests for exam changes after this date shall only be considered in cases of unforeseen personal or family emergencies.

Grading System

Student grades are reported on either a letter-grade basis or a Credit/No Credit basis:

Letter Grades

A	4.00 grade points - Excellent
A–	3.70 grade points
B +	3.30 grade points
B	3.00 grade points - Good
B –	2.70 grade points
C +	2.30 grade points
C	2.00 grade points - Fair
C–	1.70 grade points
D +	1.30 grade points
D	1.00 grade points - Passing
F	0.00 grade points - Failure
W	Withdrawal from a course under extenuating circumstances
X	Student-initiated withdrawal from a course

Credit/No Credit

CR	Credit
NC	No Credit

Other

The following notations are also used in reporting student work:

GP	Grade Pending
L	Leave of Absence granted during the semester
IN	Incomplete
WC	Withdrawal from the College during semester

Grade Changes

By Faculty vote, changes in course grades are allowed only in the case of a demonstrable mathematical error in the compilation or recording of a grade. All such grade changes must be approved by the Provost.

Credit (“CR”)/No Credit (“NC”)

Students may take up to four credit hours per semester on the Credit/No Credit basis, but may not present for graduation more than 16 credit hours of their coursework on this basis.

If students wish to take a course on the Credit/No Credit basis, they must obtain their advisor’s approval and submit a signed CR/NC card to the Registrar’s Office by the end of the second week of classes for 14-week courses or, for seven-week courses only, by the end of the second week of the module. Students are cautioned that some courses may not be taken using this option. Courses not eligible for the Credit/No Credit system are so indicated in their course descriptions.

Credit, “CR,” will be awarded for course performance equivalent to, or higher than, a passing letter grade, “D.” No credit, “NC,” will be awarded for course performance equivalent to a failing letter grade, “F.”

Grades of Incomplete

Faculty stipulate grades of Incomplete (“IN”) when they believe that extenuating circumstances preclude completion of the work on time by the student. The student is responsible for providing evidence for the extenuating circumstances to the satisfaction of the faculty member, who has sole authority to grant the Incomplete. Incompletes are awarded with the expectation that the work will be completed by the student in a timely fashion. When instructors submit a grade of Incomplete, they must also submit the grade that will be awarded should no further work be submitted by the student. The instructor should formulate a plan for timely completion of the incomplete work, and this plan should be addressed in the Academic Performance Report the instructor submits explaining the Incomplete grade and specifying a tentative grade.

Examples of circumstances in which an Incomplete is appropriate include, but are not limited to, serious illnesses or injuries that preclude a student from finishing work for a course; cases where the course grade depends on the outcome of an Honor Code hearing; or death of an immediate family member. An Incomplete should not be assigned when a student simply fails to turn in a final exam or project, nor when there is little likelihood that the student will be able to make up a large quantity of incomplete work (due, for example, to prolonged illness); in the latter case a Withdrawal for Extenuating Circumstances may be more appropriate (see “Withdrawing From a Course,” below).

After appropriate consultation with the student, the instructor will determine the date by which incomplete work must be completed. In all cases, the work must be completed no later than 30 days after the first day of classes of the semester or summer session in which the student is next registered. Students who have an “IN,” but do not register in a subsequent semester or summer session, must complete the work within 12 months. Extensions to these deadlines may only be granted by the Provost or designee. If no information is provided by the instructor by the end of the 12 months, the grade that was originally submitted at the time the “IN” was assigned is posted to the transcript.

When the instructor submits the completed grade to the Registrar, this completed grade is posted to the transcript and calculated into the grade point average for the semester in which the student was registered for the course. If no completed grade or other communication is received by the Registrar from the faculty member, the grade that was originally submitted at the time the “IN” was assigned is posted to the transcript and calculated into the grade point average.

Repeated Courses

With the exception of the First-Year/Sophomore Seminars, students may repeat courses at Allegheny, provided the courses are offered again. Whenever a student repeats a course, the academic record and transcript will reflect all course enrollments and the grade earned for each enrollment. From the time of completion of a repeated course forward, only the credit and grade for the most recent attempt will be counted in computing grade point averages. (However, for those courses that can be repeated for credit—for example, music ensembles—the credits and grades for each enrollment are included in computing the academic average). If a student withdraws from a repeated course, the academic record and transcript will include the withdrawal, and the grade previously earned will continue to be counted in computing grade point averages. Students may repeat a course initially taken on the graded basis for Credit/No Credit; however, Credit (“CR”) must be earned or the grade previously awarded will continue to be counted in computing grade point averages. In the event a student receives a grade of Incomplete (“IN”) for a repeated course, the grade previously earned will continue to be counted in computing grade point averages until such time as the student completes the coursework and a final grade has been submitted.

Transfer of Courses

To be acceptable for transfer credit, U.S. courses must be taken in residence at (i.e., through registered enrollment in) a regionally accredited institution and must be of a liberal arts nature. Courses taken outside the U.S. must be transcribed either by an accredited U.S. partner institution or by a foreign institution certified in its home country by a process of comparable rigor to U.S. accreditation. For courses taken under the standard U.S. semester system, the number of semester credit hours awarded by Allegheny is equal to the credit awarded by the institution at which the course was taken. For institutions that use other systems, the credit awarded by the institution is converted to the equivalent number of semester credit hours.

A grade of “C” or better must be earned in each course; courses with grades of “C-” or below will not be accepted for transfer. Courses taken on a pass/fail basis will be accepted only if a grade of “pass” is equivalent to at least a “C” at the awarding institution. Transfer credit will not be awarded for any course for which a student has previously earned credit at Allegheny. In addition, if a student subsequently takes a course at Allegheny for which transfer credit has previously been awarded, the transfer credit will be removed from the student’s Allegheny transcript. Transferred course credits count toward the graduation requirement of 128 semester credit hours, but the grades for such courses are not included in the student’s academic grade-point average. The Allegheny transcript does not indicate the grades of transferred courses.

The number of credits that can be transferred toward the undergraduate degree is limited by the residency requirement, which also limits how students may sequence transfer and Allegheny courses as they complete the final courses for their undergraduate degrees. For more complete information, see “The Residency Requirement.”

Transfer Credit and Graduation Requirements

Limits on how many transfer credits may be used to satisfy major or minor requirements are established by the respective program.

In some cases, transfer credit may be used to satisfy the College Distribution Requirements. Students should keep in mind that the Distribution Requirements are defined in terms of semester credit hours. For example, a three-credit course from another institution will only partially satisfy a four-credit requirement at Allegheny.

If a course transfers in as an exact equivalent to an Allegheny course (e.g., FRNCH 110, HIST 328) it will count towards the same Distribution Requirement as does the equivalent Allegheny course. Courses taken prior to matriculation by students who enter Allegheny as first-year students will NOT normally be considered for fulfillment of the College Distribution Requirements UNLESS the course has an exact Allegheny equivalent.

Courses from Allegheny-sponsored national and international study programs and courses transferred in by students who did not matriculate at Allegheny College as first-year students (i.e., transfer students) will be evaluated for fulfillment of the College Distribution Requirements by the department concerned. Courses taken independently at national or international Study Away programs will NOT normally be considered for fulfillment of the College Distribution Requirements UNLESS the course has an exact Allegheny equivalent.

Students who wish to appeal to use an ineligible course to fulfill a College Distribution Requirement should contact the Registrar’s Office for assistance. The Curriculum Committee has the final authority to determine the eligibility of these courses for fulfillment of the College Distribution Requirements.

Note for students who matriculated before Fall, 2016, under the “old” distribution requirement: transfer courses may satisfy distribution requirements in many cases depending on the department, nature, and level of the course. Please consult the Registrar’s Office for more information.

Transcripts received from other accredited institutions are evaluated by the Office of the Registrar as promptly as possible. Students desiring to have work completed at other institutions considered for transfer credit should arrange to have official transcripts or other appropriate documents forwarded to Allegheny College as soon as possible. No transfer credit can be awarded until the appropriate documents have been received by the College.

Concurrent Enrollment

Matriculated, degree-seeking students are not permitted to enroll in classes simultaneously at Allegheny and at another institution. With the exception of credit for courses in an approved off-campus study program, credits earned at another academic institution during the same term that a student is in residence at Allegheny will not be accepted for transfer. Approved off-campus programs are defined as EL seminars; Allegheny-sponsored off-campus study programs; and Abroad Independent programs administered by Allegheny's Office of International Education.

College Credit for Prior Coursework

Allegheny can accept a maximum of 32 credits from first-time, first-year students for work completed prior to matriculation. This includes Credit by Examination (see below), credit obtained for college-level courses offered at high schools by accredited colleges and universities, which is treated as transfer credit, and transfer credit for work taken in residence at accredited colleges and universities. (See Transfer of Courses, above.) Students who wish to receive credit for college-level courses offered at high schools or who are now considering taking college or university courses elsewhere should contact the Office of the Registrar for advice about transfer credit and/or selection of courses.

Credit by Examination

Students may earn college credit at Allegheny by participating in the Advanced Placement Program (AP) of the Educational Testing Service, the College-Level Examination Program (CLEP), and the International Baccalaureate (IB) testing programs. *To be eligible for credit, exams must be **taken** before the student enters college*, though scores may still be submitted after enrolling.

Students may receive credit by examination for a maximum of 20 semester credit hours (five courses). Students who receive scores of four or five on an AP examination will receive academic credit, subject to the 20-credit limit on credit by examination. Placement will be determined by the appropriate department. AP credit and course placement are considered only after receipt of official examination scores from the Educational Testing Service.

Individuals who perform well on certain CLEP tests may receive both credit and placement, usually at the first-year or sophomore levels. Departments, in consultation with the Office of the Provost, periodically establish which credits may be earned by standardized testing. Students who score five or better on the higher-level examinations of the IB testing programs may be granted credit and placement by some departments.

In some cases, AP, CLEP, or IB credit may be used to satisfy the College Distribution Requirements. Students should keep in mind that the Distribution Requirements are defined in terms of semester credit hours. For example, a three-credit course from another institution will only partially satisfy a four-credit requirement at Allegheny.

If an AP, CLEP, or IB course transfers in as an Allegheny course equivalent (e.g., PSYCH 110, MATH 160) it will receive the same credit towards fulfillment of the College Distribution Requirements as the equivalent course taken in residence at Allegheny College. AP, CLEP, or IB courses that do not transfer in as an Allegheny course equivalent do not count towards fulfillment of the College Distribution Requirements.

Note for students who matriculated between Fall, 2015, and Fall, 2016: Many AP courses do count towards the distribution requirement that applies to you. Please review your Degree Audit to see if your AP credit satisfies any of your distribution requirements.

Note for students who matriculated before Fall, 2015: AP courses **do not count** towards the distribution requirement that applies to you.

Course Registration

The normal process of preregistration for continuing students is online through *WebAdvisor* during the published preregistration period. Using *WebAdvisor*, advisors may grant approval for advisees to register. Once students have obtained advisor permission, they may register for courses electronically. For certain courses, a student may be required to obtain a signed registration card from the instructor to register for a course. First-year students register for fall semester courses during the summer advising period for new students.

Students may complete or change their registration during the College course change periods by submitting the approved registration cards (see “Adding and Dropping Courses”). Students must complete their registration for all courses for which they seek credit by the end of the change period. Students who are currently enrolled in an approved study away or visiting student program should consult with their advisor and the Registrar. Students granted a Leave of Absence who have been approved to return by the Office of the Dean of Students, and who have notified the Office of the Registrar of their intent to register in person, may also register during the registration period. Other re-entering and transfer students may register for the fall semester during Orientation in August.

Adding and Dropping Courses

Students may add and drop 14-week courses through the first two weeks of the semester. Students may add and drop seven-week courses through the first two weeks of the module in which the course is offered. The add/drop deadlines for each semester are published as part of the Academic Calendar, which is published online at: <http://sites.allegHENY.edu/registrar/academic-calendars/>.

Courses may be dropped online via *WebAdvisor* until the published deadline. Courses dropped will not appear on the official transcript but will appear, as appropriate, on the academic record maintained by the College. When planning to replace a dropped course by adding a different class, students are advised not to drop the former class until registration in the new class has been secured.

Unrestricted, open courses may be added online whenever 1) *WebAdvisor* is open to add courses for that semester and 2) the student meets all eligibility requirements for registration at that time. Once classes begin, students must secure the written permission of the instructor to add any class until the published deadline. *Please be aware that, after a class starts, instructors will become increasingly reluctant to admit additional students.*

Withdrawing From a Course

A student who wishes to withdraw from *all* courses during a semester should take a Leave of Absence or withdraw completely from the College; see the sections on “Leaves of Absence” and “Withdrawal From the College and Readmission.”

Courses may be dropped online via *WebAdvisor* during the first two weeks as described above under “Adding and Dropping Courses.” Once the drop deadline has passed, withdrawals are noted on the transcript as described below.

Student-Initiated Withdrawal (“X”)

Students may withdraw from a 14-week course without grade penalty through the first nine weeks of the semester. Students may withdraw from a 7-week course through the first four weeks of the course. Such a withdrawal will be denoted on the official transcript with a grade of “X,” but the course will not be included in the calculation of the student’s GPA. A student contemplating a student-initiated withdrawal must consult with an academic advisor and course instructor. The advisor and instructor must sign a Student-Initiated Withdrawal card to verify that students have discussed their plans to withdraw from the course. The Student-Initiated Withdrawal card must be submitted to the Registrar’s Office by the deadline published in the Academic Calendar, which is available online at: <http://sites.allegHENY.edu/registrar/academic-calendars/>. Students may take a student-initiated withdrawal for at most one course in a single semester and at most four courses during their studies at Allegheny.

Withdrawal for Extenuating Circumstances ("W")

If, as a result of extraordinary extenuating circumstances, a student wishes to withdraw from a course after the appropriate course registration change period has expired (see "Adding and Dropping Courses," above), the student may ask the instructor to grant a Withdrawal for Extenuating Circumstances ("W"). Such a Withdrawal can only be granted to a student whose performance has been significantly affected by unexpected circumstances beyond the student's control. For example, a Withdrawal for Extenuating Circumstances may be granted in the event of a prolonged serious illness, or if there is a serious and incapacitating change in a student's family situation. A Withdrawal cannot be granted simply for poor academic performance or failure to attend class, nor will it be granted when a Student-Initiated Withdrawal ("X") is appropriate. The student is responsible for providing evidence of extraordinary extenuating circumstances to the satisfaction of the faculty member, who has sole authority to grant the Withdrawal. When such a request is granted, the student's transcript will show a grade of "W." This grade will not be included in the calculation of the student's grade point average.

Internship Registration

All students seeking academic credit for an internship must obtain faculty approval and should register for the internship prior to beginning the internship experience. Students are not permitted to register retroactively for an internship experience after the work with the community partner has already been completed. The student's transcript will reflect internship enrollment for the semester or summer session in which the student actually participates in the internship experience.

Information on possible internships is available from the Allegheny Gateway. Students interested in participating in an internship experience that is not listed as a departmentally sponsored internship should consult with their academic advisors and the Gateway. The Gateway can also provide information on non-credit-bearing internships; these do not include an academic component but may be listed on students' resumes as employment experience.

Academic Records and Reports

Grade Reports

At the conclusion of the Fall and Spring Semesters, student grade reports are available on the student's *WebAdvisor* account. Students may request additional copies of their grade reports to be sent to designated person(s) by signing an Academic Records Release form available in the Office of the Registrar.

Transcripts and Student Records

A transcript is a copy of the official permanent student record that indicates attempted courses by title and number and the grades earned for those courses together with an explanation of the Allegheny grading system. The Office of the Registrar has responsibility for maintaining these records and for making copies of them available as transcripts. When current students wish official transcripts to be sent to other institutions, prospective employers, or themselves, they should submit a request through the link provided on WebAdvisor. Students who have graduated or withdrawn should submit requests directly via the Transcripts on Demand service <https://iwantmytranscript.com/>. A fee of \$7 is charged for official transcripts; additional fees may be assessed for expedited or express delivery. Printed, official transcripts are stamped with the signature of the Registrar in red ink; electronic delivery of official transcripts is also available. For current students, no transcripts are released from the day grades are due from the faculty for each semester until the day that all grades have been posted.

Unofficial transcripts are available to current students and their advisors through the College's *WebAdvisor* web page. These transcripts are intended only for use in scheduling classes and advising students; under no circumstances should they be considered an official record of students' academic performance.

Academic Standing

Academic Standards and Awards Committee

The Academic Standards and Awards Committee is responsible for reviewing the academic records of Allegheny students and, when appropriate, assigning an individual student to a particular Academic Standing category. By matriculating at Allegheny, students recognize the right of the Committee to determine their Academic Standing.

The membership of the Academic Standards and Awards Committee includes Allegheny faculty, students, and those administrators who assist students experiencing difficulty in their college work. All actions concerning academic standing are taken after careful analysis of the individual student's level of achievement, aptitudes, study efficiency, and sense of purpose. At the end of each semester the Committee reviews the records of all students whose semester or cumulative grade point averages render them subject to one of the following Academic Standing Categories. Decisions regarding appeals of academic dismissal are made by majority vote of the faculty members of the Committee.

Grade Point Average

The cumulative grade point average includes all graded Allegheny courses, but does not include courses taken under the Credit/No Credit option or courses in which the student opted to withdraw ("x") or received an Incomplete or a "W." When a course is repeated, the credits and grade for the most recent attempt will be counted in the current cumulative average. However, for those courses that can be repeated for credit—for example, music ensembles—the credits and grades for each enrollment are included in computing the academic average.

Academic Standing Categories

Academic Warning

Academic Warning is assigned to students who have two consecutive semesters with a semester average below 2.0, but whose cumulative grade point average remains above 2.0. Students remain on Academic Warning until they achieve a semester grade point average over 2.0.

Academic Probation

Academic Probation is assigned to students at the conclusion of the first semester in which the cumulative grade point average falls below 2.0. Students remain on Academic Probation for one semester, at the end of which the student may be subject to dismissal or placed on Poor Academic Standing if the cumulative average remains below 2.0.

Poor Academic Standing

Students are placed on Poor Academic Standing if they have two or more consecutive semesters with a cumulative grade point average below 2.0 and if they have not been dismissed by the College. All students not on Poor Academic Standing are considered to be in good academic standing.

Students in their first semester at Allegheny College who receive a G.P.A. of 1.0 or below are eligible for academic dismissal as discussed below. If not dismissed, these students are also placed on Poor Academic Standing and are subject to the following requirements: 1) to meet with a representative from the Learning Commons; and 2) to work with that representative to create a plan to improve their academic performance. Students may also be required to enroll in no more than 12 credits during the next semester. Please note that students on Poor Academic Standing cannot participate in varsity athletics until their cumulative G.P.A. rises to a 2.0 and are not permitted to become members of the College Greek system until their G.P.A. meets the requirements outlined for Greek chapters.

Academic Dismissal

Students placed on Academic Probation or Poor Academic Standing, and whose cumulative grade point average remains below 2.0 at the conclusion of their next semester at Allegheny, are dismissed from the College unless they meet all of the following criteria: 1) they complete at least 12 credits; 2) they receive passing grades for all their courses; 3) they achieve a semester grade point average of at least 2.0. Students who meet all of these criteria will not be dismissed but will continue on Poor Academic Standing. For the purposes of satisfying the above criteria, grades of Incomplete (IN) and No Credit (NC) are not considered passing grades. Withdrawals from a course (grades of "X" and "W") are not considered in determining whether students have passed all of their classes, but any courses from which a student has withdrawn do not count towards the 12 credit minimum that students must complete to avoid dismissal. Students whose grade point average is 1.0 or below at the conclusion of their first semester of attendance at Allegheny are also subject to dismissal from the College. Academic dismissals take effect immediately following the completion of the Academic Standards and Awards Committee's review of appeals (see "Appeals" below). Dismissal at the end of the first semester of attendance at Allegheny is for a minimum of six months, and other dismissals are for a minimum of one calendar year. Students approved to return after the specified time has elapsed will be placed on Poor Academic Standing upon their return. Students who are dismissed are prohibited from taking Allegheny courses until they are readmitted to the College.

Dismissed students seeking readmission should submit a written request to the Registrar's Office by May 1 for a fall term readmission and November 1 for a spring term readmission. Students are encouraged to contact the Registrar's Office prior to these deadlines for assistance in preparing the request for readmission. If a student who has been readmitted to the College after dismissal fails a second time to achieve the minimum standard, the student may be dismissed for a second time. A student who is dismissed twice for poor academic performance may not apply for readmission. The second dismissal may occur at the conclusion of any semester subsequent to readmission, provided the cumulative average does not rise above 2.0.

Appeals

Academic Warning, Academic Probation, and Poor Academic Standing are determined by grade point average and are not subject to appeal.

Academic dismissals are initially determined automatically on the basis of academic performance as described above. Students are encouraged to appeal dismissal if they can demonstrate the potential for success at Allegheny. To appeal, students must send statements specifically discussing recent academic performance, trends in grades, and any relevant personal circumstances to the Registrar's Office. All materials related to an appeal of academic dismissal must be received by the date specified in the letter informing the student of the initial dismissal. Late appeals will not be considered. Students who successfully appeal a dismissal will be placed on Poor Academic Standing.

Transcript Notation

Academic Dismissal is noted on the transcript; Academic Warning Academic Probation, and Poor Academic Standing are not.

Leaves of Absence

Students may apply to the Office of the Dean of Students for a Leave of Absence when personal circumstances make a temporary absence advisable and a commitment to return to the College is evident. The length of the leave is determined by the student's needs, but normally will not exceed one calendar year. Students may be granted leaves from the College without grade penalty up until the last day of classes in any semester. Depending on the circumstances, a leave may be arranged during or between semesters. However, students on a leave may return only at the beginning of an academic semester. When a student is granted a Leave of Absence during the semester, the course registration remains on the transcript and the notation "L" is assigned instead of a letter grade.

During a Leave of Absence, the general deposit required of all students is maintained on account; when applicable, financial aid and course registration arrangements are held for the student's return. Students on leave should contact the Office of Residence Life to make arrangements for on-campus housing. Students also may register for the next semester in person during the designated registration period. Students must inform the Registrar of their intent to participate in registration.

Students considering a Leave of Absence must consult their advisor and others, as appropriate, about the effect it will have on progress toward a degree, financial aid, and billing. Tuition and board refunds for Leaves of Absence are governed by institutional policy; please contact the Office of Financial Services for information.

Leaves of Absence for Personal or Community Health/Safety Reasons

- Students are permitted to take voluntary leaves of absence to address medical or mental health concerns. All requests for voluntary leaves must be approved by the Dean of Students or his/her designee. The Dean of Students, in consultation with health professionals as necessary, will specify the conditions to be satisfied (if any) before the student may return to Allegheny.
- The Dean of Students may place a student on a leave of absence following an individualized assessment of a student in which the College determines in the exercise of its judgment that a student reasonably meets one or more the following criteria:
 - A student presents a substantial risk of harm to others or has engaged in threatening or violent activities;
 - A student presents a substantial risk that the student will harm him/herself, and that risk cannot be eliminated or reduced to an acceptable level through reasonable and realistic accommodations;
 - A student significantly disrupts the educational or other activities of the College community;
 - A student is unable or unwilling to carry out substantial self-care obligations or to participate meaningfully in educational activities; or
 - A student requires a level of care that exceeds the resources and staffing that the College can reasonably be expected to provide for a student's well-being.
- Where appropriate and feasible, the Dean of Students or his/her designee will notify a student that a leave of absence is under consideration. In situations involving an imminent or ongoing threat to the College community, it may be appropriate for the College to require the student to be away from the College while the individualized assessment and review are taking place. Students are expected to cooperate in the assessment. The Dean of Students may require a mental or physical evaluation from a clinician designated by the College (at no cost to the student) if the Dean believes such an evaluation of a student will facilitate a more informed decision. Students are expected, if necessary, to sign a release of information to facilitate the discussions between the College and the clinician conducting an evaluation.
- If a student declines to take a leave of absence voluntarily, the Dean of Students will convene a Committee to advise the Dean on whether a mandatory leave of absence should be invoked. The Committee will include at least three persons, one of whom shall be the Director of the College's Counseling Center or designee. The Dean of Students and the Committee may consider relevant documentation made available to them. They may also confer with individuals who have relevant information about whether a leave of absence is appropriate for a particular student. The student will have the opportunity to respond to the concerns in writing and/or in-person/telephonically before the Committee.
- The Dean of Students will provide written notice to the student regarding the decision as to imposition of a mandatory leave. If a leave of absence is imposed, the written notice shall include (i) a time-frame when the student could be eligible to return; and (ii) the conditions the student would need to satisfy to be eligible for

return. If a leave is not imposed, the Dean of Students may require conditions for the student's continued enrollment at Allegheny.

- All reviews under this policy should be done in a reasonably timely manner. Where a student has been asked to remain off campus pending the review, every effort will be made by the Dean of Students to reach a decision within seven business days provided the student responds timely to requests for information and (if appropriate) evaluation.
- A student placed on mandatory leave of absence has the right to appeal to the Executive Vice President. The appeal must be in writing, delineating the reason(s) why the student believes the decision is inappropriate. The appeal must be received within three days of receiving written notification of the decision to place the student on mandatory leave. The appeal may relate to the leave decision itself and/or the conditions imposed to return to school. The Executive Vice President will review the student's appeal and uphold, reverse or modify the decision. The Executive Vice President's decision shall be considered final.
- The length of any mandatory leave of absence will be determined on a case-by-case basis.
- Unless expressly permitted by the Executive Vice President or the Dean of Students in writing, students on mandatory leave of absence are not permitted to be present on campus and are not permitted to engage in any College-related activities. Students on a voluntary leave of absence are expected to check in with the Dean of Students prior to visiting to discuss their visit.
- When a student who has been on a mandatory leave of absence pursuant to this policy wishes to return to the College, the student must submit a written request to the Dean of Students to return. The Dean of Students may require further evaluation of the student to determine readiness to return. The Dean of Students may confer or seek information from others to assist in making the determination. If the Dean of Students is not satisfied that the student is ready to return, the Dean will notify the student in writing of the decision, including the reasons for the decision. A student not permitted to return may appeal the decision to the Executive Vice President. If the student is approved to return, Winslow Health Center or Counseling Center staff members may make recommendations to the Dean of Students regarding conditions of return. The student will receive written notification of any conditions. Written requests for return from mandatory leave should be submitted no later than July 1 for the fall semester or November 15 for the spring semester.
- A leave of absence under this policy is an administrative process, not a disciplinary process. It is possible that conduct leading to a mandatory leave of absence under this policy may also be subject to review and sanctions under the College's Student Code of Conduct.
- For information regarding the effect of a leave of absence under this policy on matters such as transcripts, registration, financial aid, housing and refund policies, see above.

Withdrawal From the College and Readmission

Students wishing to withdraw from only a single course while still completing other registered courses should consider dropping the course (see "Adding and Dropping Courses" in the "Course Registration" section), if still permitted, or a Withdrawal if the drop deadline has already passed (see "Withdrawing From a Course" in the "Course Registration" section).

Students desiring to withdraw completely from the College must complete the withdrawal form available from the Office of the Dean of Students. In order to receive a deposit refund, students must withdraw according to the following deadlines: July 1 for the Fall semester; by one week prior to the first official day of classes for the Spring semester. Students may withdraw from the College without grade penalty up until the last day of classes in any semester. When a student withdraws from the College during the first two weeks of the semester, 14-week courses will not appear on the official transcript, but, as appropriate, will appear on the academic record. Students who withdraw from the College between the conclusion of the second week of the semester and the last day of classes will receive the grade of "WC" for all courses for which they are registered. This will not affect their grade point average. If a student withdraws after the last day of classes, the grades for that semester will be posted to the student's record, and the student is subject to all applicable academic standing actions, including academic dismissal.

Leaves of Absence and Withdrawal from the College

Students who do not resume study at the opening of any semester are withdrawn from the College by action of the Dean of Students.

Students who withdraw may return to the College by notifying the Office of the Dean of Students no later than July 1 for the fall semester or December 1 for spring semester. A re-entering student is required to pay the \$400 deposit at the time he or she notifies the Office of the Dean of Students of the date of return.

When students re-enter, they shall be governed by the academic requirements applicable to the class of which they become a part, with the exception that the total number of credits required for graduation is that specified for the class with which they originally matriculated at the College. Students who withdraw from the College are expected to leave the campus within 48 hours. They lose all privileges of enrollment until such time as they are readmitted. Tuition and board refunds for Leaves of Absence and Withdrawals from the College are governed by institutional policy; please contact the Office of Financial Services for information.

Honors

Alden Scholars

Students who, in the course of a year (September to September), complete a minimum of 30 semester credit hours and achieve a grade point average of 3.20 or higher are designated as Alden Scholars. Students who achieve a grade point average of 3.80 or higher receive special recognition as Distinguished Alden Scholars. Grades of Credit and No Credit are not considered in making Alden Scholar designations. However, credit hours earned for grades of Credit do count toward the minimum hours required for Alden Scholars. For students studying abroad for the full year, the grades submitted by the foreign institution will be used whenever possible. However, the grades will be evaluated within the context of the foreign institution's grading system, and other pertinent data will be taken into account in each case. For students who study abroad for one semester, Alden Scholar eligibility for that year will be determined by considering both the Allegheny record and the grades from the foreign institution. At least 16 semester credit hours must be completed during the semester at Allegheny.

Students named as Alden Scholars during their senior year and/or at any time during their undergraduate career are recognized in the Commencement program at the time of graduation and on their academic record.

Doane Scholars

Each year up to 30 students from the sophomore, junior, and senior classes are honored as Doane Distinguished Scholars. These students have earned the highest cumulative averages in their respective classes and are awarded a prize and a medal, and they receive recognition in the Commencement program and on their academic record. The 30 annual awards are made possible through the generosity of the late Mrs. Sandra Doane Turk.

Graduation Honors

Students who have achieved a cumulative grade point average of 3.90, with at least 64 semester credit hours taken at Allegheny and evaluated on the letter-grade basis, may be awarded their degrees *summa cum laude*. Students who have achieved a cumulative grade point average of 3.70, with at least 64 semester credit hours taken at Allegheny and evaluated on the letter-grade basis, may be awarded their degrees *magna cum laude*. Students who have achieved a cumulative grade point average of 3.50, with at least 64 semester credit hours taken at Allegheny and evaluated on the letter-grade basis, may be awarded their degrees *cum laude*. Whether awards are finally made will depend upon the total academic record of the student, including his or her compliance with the College Honor Code and vote of the faculty. The sanction of Probation, Suspension, or Expulsion received for academic violations will disqualify a student from consideration for Latin Honors.

Major Field Honors

At the conclusion of the senior year, students who have done distinguished work in the major field may be awarded honors in that field. Honors in a student-designed major will be awarded upon the decision of a committee consisting of the members of the Curriculum Committee and the individual student's academic and senior project advisors.

Phi Beta Kappa

Phi Beta Kappa, a national honorary scholastic society founded in 1776, has had a chapter at Allegheny since 1902. Members are elected from the senior class on the basis of scholarship and moral character. The breadth of a student's program, as shown by high achievement in a variety of courses taken outside the major field of study, is a factor in election. Elections and initiation into the society take place twice each academic year. In the fall, students who have demonstrated exceptionally distinguished academic achievement through the sixth semester are elected and initiated at the beginning of their senior year. In the spring, other academically outstanding members of the senior class are elected and initiated in a ceremony before graduation. Inquiries about the selection process may be directed to the Office of the Provost and Dean of the College.

Valedictorian Selection

The student selected as valedictorian of the senior class embodies the highest level of academic achievement, scholarship, personal integrity, and ethical character in the tradition of liberal arts at Allegheny College. The valedictorian is selected by the Provost and Dean of the College on the basis of these criteria. Often the student in the graduating class with the highest GPA is chosen to be the valedictorian, but the depth, breadth, and rigor of a student's program, as exemplified by high achievement in a variety of courses taken outside the major field of study, are also important selection criteria. In addition, the Dean of Students Office is consulted to ensure that the student chosen as valedictorian has no Honor Code or significant disciplinary violations. The selection process occurs during the spring semester on the basis of the college record at that point in time. Two or more students may be named co-valedictorians if their records justify it, though this happens only infrequently.

Courses of Instruction

Successful completion of Allegheny's four-year program leads to the degree Bachelor of Arts or Bachelor of Science. The Bachelor of Arts degree is earned by completing successfully all college requirements (see "Graduation Requirements"), including a major in one of the following disciplines: Art History; Art and Technology; Communication; Community and Justice Studies; Economics; English; Environmental Studies; French; German; History; International Studies; Music; Philosophy; Political Science; Religious Studies; Spanish; Studio Art; Theatre; or Women's, Gender, and Sexuality Studies. The Bachelor of Science degree is awarded when completion of college requirements includes a major in Applied Computing, Biochemistry, Biology, Chemistry, Computer Science, Environmental Geology, Environmental Science, Mathematics, Neuroscience, or Physics. Students majoring in Geology, Global Health Studies, or Psychology may earn either a Bachelor of Arts or a Bachelor of Science degree, depending upon course selection and the area of emphasis. Students planning double or student-designed majors that include courses from different disciplines determine the appropriate degree in consultation with faculty.

In addition to appropriate courses and advising to prepare for law school and postgraduate study in the health professions (including medical school), the College also offers pre-professional programs in allied health fields, engineering, environmental studies, nursing and teacher certification through cooperative program arrangements; see the "Curricular Options" section of this *Bulletin* for more information.

Courses offered are listed within a specific department or field. Not all courses are offered each year, and the College reserves the right to cancel or reschedule courses for enrollment, staffing, or other reasons. Changes in staffing may also be necessary. Places in courses cannot be guaranteed other than by the established registration procedures. There may be minor variation in course content or approach from the *Bulletin* course description if the instructor deems it appropriate. Each academic year, the courses to be offered and the semester in which they are taught is made available on-line via *WebAdvisor*.

Course Classification and Distribution Requirements

The Distribution Requirements satisfied by a course are indicated in the course description using the following letter codes:

- CL: Civic Learning
- HE: Human Experience
- IP: International and Intercultural Perspectives
- ME: Modes of Expression
- PD: Power, Privilege, and Difference
- QR: Quantitative Reasoning
- SB: Social Behavior and Institutions
- SP: Scientific Process and Knowledge

Courses for which no codes are listed do not satisfy any Distribution Requirements; these include FS courses, Junior Seminars, Internships, and Senior Projects as well as Special Topics courses numbered in the 90's (see "The Numbering System," below).

Students Matriculating Before Fall, 2016

Students who matriculated at Allegheny before Fall, 2016, are governed by the distribution requirement in effect at the time they entered and must take at least eight credits in each of the three divisions of the College. Of the eight credits taken in the Natural Science division, at least four must be in a qualifying laboratory course (however, students majoring or minoring in Mathematics are exempt from the laboratory requirement). In most cases, the division of a course is determined by the division of the department in which it is offered:

Humanities

Art; Communication Arts; Dance and Movement Studies; English; Modern and Classical Languages (includes Arabic, Chinese, French, German, Latin, and Spanish); Music, Philosophy; Religious Studies.

Natural Sciences

Biochemistry; Biology; Chemistry; Computer Science; Geology; Mathematics; Neuroscience; Physics. Note, however, that MATH 159 *Precalculus* does not count toward the distribution requirement.

Social Sciences

Economics; History; Political Science; Psychology; Sociology and Anthropology.

Extradivisional and Interdivisional Programs

FS 101 and FS 102 are considered extradivisional and do not count as divisional courses. Most courses offered by interdivisional programs, including interdisciplinary courses designated INTDS, do not count for distribution; however, some courses in the following interdivisional programs may count for distribution as noted in the specific course descriptions in this *Bulletin*: Black Studies, Environmental Science, and Journalism in the Public Interest.

The Credit System

All courses carry four semester hours of credit unless otherwise specified in the course description.

The Numbering System

Courses are numbered as follows:

001–299: Primarily for first-year students and sophomores

- **190–199*:** Special topics, primarily for first-year students and sophomores, offered once or twice.
- **290–299*:** Special topics, primarily for first-year students and sophomores, offered once or twice.

300–589: Advanced, primarily for juniors and seniors

- **390–399*:** Special topics, advanced level, offered once or twice.
- **490–499*:** Special topics, advanced level, primarily for juniors and seniors, offered once or twice.
- **500–539:** Undergraduate internships
- **540–549:** Internship seminars
- **550–589:** Junior/Senior seminars

590–593: Supervised independent work (see specific descriptions below). On rare occasions, a course numbered in the 590 range may be a student's only option for completing a College curricular requirement. In such cases, the instructor should contact the Registrar *before* the course begins and must document how the course satisfies the intention of the requirement it will be used to fulfill.

600–630: Senior Projects (see specific descriptions below)

**Note on Special Topics courses and the Distribution Requirements:*

- **Students matriculating in Fall 2016 and afterwards:** Special Topics courses (190-199, 290-299, 390-399, and 490-499) *do not count* towards the College Distribution Requirements.
- **Students who matriculated before Fall 2016:** Special Topics courses count for distribution if offered by a program in one of the three divisions of the College. In particular, courses numbered 195-197, 295-297, 395-397, or 495-497 satisfy the laboratory component of the Natural Science requirement.

590 Independent Study

An independent study or research experience. The student independently pursues a topic or project of interest with guidance from a faculty member. Students meet one-on-one with the faculty mentor on a regular basis and also complete independent readings, laboratory work, or comparable activities. Credit: One to four semester credit hours. *Prerequisite: permission of instructor.*

591 Group Study

Group study or research with faculty guidance. A group of students meets together with a faculty member on a regular basis to pursue a topic in depth. Students typically complete a set of common readings and assignments. Credit: One to four semester credit hours. *Prerequisite: permission of instructor.*

592 Teaching in the Elementary or Secondary Schools

A field experience in education during which students work with teachers and students in elementary or secondary schools. Relevant readings, as well as discussions with the instructor and the supervising teacher, provide the background and context for the fieldwork. Students are required to keep a reflective journal and to complete a culminating project based on their experiences in the classroom. Credit: Two to four semester credit hours. *Prerequisite: permission of instructor.*

593 Peer Mentoring

Structured work to enhance learning by other students who are enrolled in a regular course. To receive academic credit, peer mentors are expected to complete assignments other than those assigned in the course and to reflect on the peer-leadership experience. Credit: One to four semester credit hours. *Prerequisite: permission of instructor.*

600–630: Senior Project

Registration for the senior project requires instructor permission in all cases.

- **600.** First semester of two-semester senior project. Credit: One to four semester credit hours; varies by department.
- **610.** Second semester of two-semester senior project. Credit: One to four semester credit hours; varies by department.
- **620.** One-semester senior project. Credit: four semester credit hours.
- **630.** One-semester senior project offered in a seminar format. Credit: four semester credit hours.

Arabic

Professor Hilal

Courses in Arabic are offered by the department of Modern and Classical Languages. For Allegheny's Learning Outcomes for the study of modern languages, including Arabic, please see the "Modern and Classical Languages" section in this *Bulletin*.

Study Abroad

Students learning a foreign language are urged to spend a semester or preferably a year abroad. The College sponsors several distinct study-abroad programs that are open to all qualified Allegheny students and to which Allegheny financial aid may be applied; see the "Study Away Programs" section of this *Bulletin* for details. In particular, the sponsored program at Al Akhawayn University in Morocco offers instruction in Arabic.

Arabic Courses

ARAB 110 Beginning Arabic I

An introduction to Modern Standard Arabic. Students learn the basic sound and writing systems of Arabic and are exposed to various aspects of Arab culture. Communication at an elementary level is achieved by study of language components including sounds, letters, grammar, and vocabulary. Four class meetings are held each week. Distribution Requirements: IP, ME.

ARAB 120 Beginning Arabic II

Continued introduction to Modern Standard Arabic. Emphasis is placed on the functional use of the Arabic language. Students learn the basic structural patterns of grammar and phonology, develop basic writing and conversational skills, and receive further introduction to Arab culture. Four class meetings are held each week. *Prerequisite: ARAB 110 or permission of the instructor.* Distribution Requirements: IP, ME.

ARAB 215 Intermediate Arabic I

Continued study of Modern Standard Arabic, with emphasis on grammar and expansion of vocabulary, as well as current events and cultures of Arabic-speaking societies. Attention is given to reading, writing, listening comprehension, and speaking skills. Three 50-minute class meetings are held each week, plus an additional practicum hour (to be arranged) with an Arabic teaching fellow that emphasizes speaking and interacting in Arabic. *Prerequisite: ARAB 120 or permission of the instructor.* Distribution Requirements: IP, ME.

ARAB 225 Intermediate Arabic II

Continued study of the basic structural patterns of Modern Standard Arabic. Students acquire more vocabulary and more knowledge of fundamental grammatical structures in order to attain a higher level of proficiency in communicating in Modern Standard Arabic. We focus on principles of word formation, roots and patterns, and use of the dictionary to read more complex texts. *Prerequisite: ARAB 215 or permission of the instructor.* Distribution Requirements: IP, ME.

ARAB 250 Modern Arabic Novel in Translation

An introduction to the contemporary Arabic novel and the historical, political, and cultural realities of the Middle East. Class sessions focus on discussion of key developments in the literature of the contemporary Arabic-speaking world. The selected novels, originally written in Arabic but translated into English, offer a space to discuss the important issues that have influenced this genre: colonialism and post-colonialism, religion and secularization, orientalism, and feminism. Distribution Requirements: HE, PD.

ARAB 529 Internship: Arabic

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

Art

Professors Darren Miller (Chair), Carr, Geffen, S. Prince, Rich, Schindler, Thomas

The department firmly believes that art is fundamental to liberal arts education and that the opportunities provided for the study of artistic forms and concepts reflect the College's commitment to creativity.

The department's major programs are designed to develop a broad intellectual grounding in the traditions of the visual arts through an understanding of studio and art history, coupled with knowledge from other disciplines. Students learn to discriminate between the processes of production, interpretation, and evaluation and to think creatively about all aspects of artistic problem solving. Through the examination and creation of original works of art, students learn to contextualize works of art and understand the relationship between praxis, theory, and history.

Courses in Studio Art, Art & Technology, and Art History are offered to meet the needs of majors and minors as well as students taking art courses as electives in the Humanities. Our curriculum is designed to be hierarchical in structure. Studio Art and Art & Technology have breadth in their foundation courses and depth in their media focus requirement, and the programs lead students to accept increasing responsibility for the concepts, imagery and media with which they work. Through courses such as the Junior Seminar, Advanced Studio Projects, and the Senior Comp, students learn to write about, speak about, research, produce, exhibit, and document their work.

Students in art history take courses ranging from surveys to specialized courses in historical eras and seminars on methodology. They acquire a knowledge of formal and conceptual analyses of the art object, learn to apply the research principles and critical methodologies of the discipline to specific areas of historical study, and investigate the cultural contexts of world art throughout history.

The Bowman, Megahan, and Penelec Art Galleries provide a major exhibition facility for northwestern Pennsylvania, offering a lively and varied exhibition program with an accent on contemporary art. Field trips to the Cleveland Museum of Art, the Albright-Knox Gallery in Buffalo, or the Carnegie Museum of Art, Andy Warhol Museum, and the Mattress Factory in Pittsburgh each provide contact with major art collections. Other resources include a College collection of paintings, prints, drawings and photographs.

Art Learning Outcomes

Learning Outcomes for Studio Art and Art & Technology Majors

Students who successfully complete a major in Studio Art or Art & Technology will be able to:

1. Actively engage in the production of a body of work that demonstrates conceptual sophistication while also conveying meaning, investigating human experiences, and integrating knowledge from other disciplines and cultural contexts;
2. Make original works of art that demonstrate effective use of design principles, creative problem-solving, and appropriate craftsmanship and technique, in a range of mediums;
3. Interpret and critically evaluate art and media, in writing and in speech, from an informed perspective by carrying out relevant research, contextualizing and interpreting relevant works;
4. Exhibit familiarity with the works and intentions of major artists/designers and movements of the past and the present, both Western and global, and familiarity with contemporary art and critical theory;
5. Develop professional practices through the exhibition of their work in a gallery setting, documentation of work in a portfolio, and proposal writing.

Learning Outcomes for Studio Art Minors

Students who successfully complete a minor in Studio Art will be able to:

1. Actively engage in the production of a body of work that demonstrates conceptual sophistication while also conveying meaning, investigating human experiences, and integrating knowledge from other disciplines and cultural contexts.

2. Make original works of art that demonstrate effective use of design principles, creative problem-solving, and appropriate craftsmanship and technique, with focus on one medium.
3. Interpret and critically evaluate art and media, in writing and in speech, from an informed perspective by carrying out relevant research, contextualizing and interpreting relevant works.
4. Exhibit familiarity with the works and intentions of major artists/designers and movements of the twentieth century and with contemporary art and critical theory.
5. Develop professional skills, such as exhibition of their work in a gallery setting, documentation of work in a portfolio, and proposal writing.

Learning Outcomes for Art History Majors

Students who successfully complete a major in Art History will be able to:

1. Demonstrate a general knowledge of the monuments and principal artists of all major art periods of the past, including:
 - A broad understanding of the art of the twentieth century;
 - Acquaintance with the art history of non-Western cultures, knowledge in greater depth and precision of several cultures and periods in the history of art;
 - A concentration in at least one area at an advanced seminar level;
 - Study of theory and criticism using a variety of analytical critical approaches.
2. Utilize tools and techniques of scholarship, including:
 - Writing in various formats;
 - Speaking in various formats, using appropriate presentation technology;
 - Research methods, proper citation methods and legal use of reproductions of imagery,
 - Production of a senior project that considers a single work of art or a narrowly defined body of works in their historical context, analyzed from a distinctive authorial point of view based upon critical and theoretical insights.
3. Integrate and apply knowledge from other disciplines and cultural contexts, including a general knowledge of world history. Adequate mastery of at least one foreign language to support research through the reading of primary source materials is highly recommended.
4. Demonstrate a functional knowledge of the creative process, normally accomplished through one or more foundation or other studio courses.

Learning Outcomes for Art History Minors

Students who successfully complete a minor in Art History will be able to:

1. Demonstrate a general knowledge of the monuments and principal artists of all major art periods of the past, including:
 - A broad understanding of the art of the twentieth century;
 - Acquaintance with the art history of non-Western cultures;
 - Knowledge in greater depth and precision of one period in the history of art;
 - Work at an advanced seminar level;
 - Study of theory and criticism using a variety of analytical critical approaches.
2. Utilize tools and techniques of scholarship, including:
 - Writing in various formats;
 - Speaking in various formats, using appropriate presentation technology;
 - Research methods, proper citation methods and legal use of reproductions of imagery.
3. Demonstrate a functional knowledge of the creative process, normally accomplished through one or more foundation or other studio courses

Majors: Studio Art; Art History; Art and Technology

Students who major in the Art Department select an emphasis in Studio Art, Art History, or Art and Technology. All emphases must have the approval of the department and lead to the Bachelor of Arts degree. Art majors are required to have a GPA of at least 2.0 in art at graduation. All art courses taken at Allegheny on a letter grade basis are included in the calculation with the exception of repeated courses for which only the most recent grade counts. All art courses must be taken on the letter grade basis (except ART 600, which is only offered Credit/No Credit). Under exceptional circumstances,

one additional course taken Credit/No Credit may be presented for the major with permission of the chair of the department. Typically, this exception is made when a student has taken an art course CR/NC before declaring a major in the department.

Studio Art Major

The Studio Art major emphasis requires the completion of 48-64 semester hours, including:

Foundation Courses:

- ART 151 *Drawing I*
- ART 155 *The Creative Process* or ART 156 *Art and the Environment*
- ART 261 *Sculpture I*
- ART 281 *Painting I*
- ART 171 *Photography I* or ART 285 *Electronic & Intermedia Art I*

Art History Courses:

- ART 110 *Survey of Art History I*
- ART 111 *Survey of Art History II*
- ART 247 *Art of the 20th Century* or ART 249 *Art Since 1945*

Media Sequence:

Choose a two-course sequence from one of the areas listed below. Foundation courses may not be included in the Media Sequence.

- ART 165, ART 265 (ceramics)
- ART 285, ART 385 or ART 386 (computer art)
- ART 251, ART 255, ART 351 (drawing)
- ART 381, ART 583 (painting)
- ART 171, ART 271, ART 583 (photography; ART 583 may be used only if ART 171 serves as a foundation course)
- ART 275, ART 276, ART 375 (printmaking; any two of these)
- ART 361, ART 583 (sculpture)

Upper Level Requirements:

- ART 580 *Junior Seminar* (must be taken on the letter grade basis)
- ART 620 *Senior Project: Studio Art* (must be taken on the letter grade basis)

Recommended Courses: ART 583 *Advanced Studio Projects* is strongly recommended, as are additional electives selected from Studio and Art History courses.

Art History Major

The Art History emphasis requires the completion of at least 42 semester hours, including the following courses:

- Any Studio Art course
- ART 110 *Survey of Art History I*
- ART 111 *Survey of Art History II*
- Four 200-level Art History courses (two before 1600, two after 1600)
- One 300- or 400-level course
- ART 582 *Seminar: Art History* (or other junior seminar as appropriate)
- ART 600 *Senior Project I: Art History* (must be taken on the Credit/No Credit basis)
- ART 610 *Senior Project II: Art History* (must be taken on the letter grade basis)

Note that 200-level Art History courses are offered in a rotating sequence. Students planning to continue their study of the history of art are strongly advised to strengthen their emphasis with proficiency in French or German at the intermediate level. They are also encouraged to supplement their studies with courses in the history and literature of their period of emphasis.

Art and Technology Major

The Art and Technology emphasis is designed to support students interested in exploring the connections between photography, video, and computer art and requires the completion of 48-64 semester hours including:

Foundation courses:

- ART 155 *Introduction to Studio Art: The Creative Process* or ART 156 *Introduction to Studio Art: Art and the Environment*
- ART 285 *Electronic & Intermedia Art I*
- ART 171 *Photography I*
- COMRT 285 *Visual Production I*

Art History courses:

- ART 110 *Survey of Art History I*
- ART 111 *Survey of Art History II*
- ART 247 *Art of the 20th Century* or ART 249 *Art Since 1945*

Media Sequence:

Choose a two-course sequence from one of the areas listed below. Foundation courses may not be included in the Media Sequence.

- ART 385 *Electronic & Intermedia Art II*, ART 386 *Internet Art*, or ART 583 *Advanced Studio Projects* with work in computer art
- ART 271 *Photography II* and ART 583 *Advanced Studio Projects* with work in photography
- COMRT 300 *Visual Production II* and ART 583 *Advanced Studio Projects* with work in video art

Upper Level Requirements:

- ART 580 *Junior Seminar* (must be taken on a letter grade basis)
- ART 620 *Senior Project: Studio Art* (must be taken on a letter grade basis)

Electives:

Four credits required to be selected from: ART 151, ART 165, ART 261, ART 275, ART 276, and ART 281.

Minors: Studio Art, Art History

All six courses (24 semester credit hours) presented for the minor must be taken on the letter grade basis. Under exceptional circumstances, one course taken Credit/No Credit may be presented for the minor with permission of the chair of the department. Typically, this exception is made when a student has taken an art course CR/NC before declaring the Art minor. This policy applies to all minors in Art, including both Studio Art and Art History.

Studio Art Minor

The Studio Art Minor requires completion of six courses (a minimum of 24 semester hours). This includes: one Foundation course; one Art History course; two courses in an artistic medium (the Media Sequence); one elective studio art course; and the advanced seminar (ART 583). No course can be counted twice.

Foundation course (choose one of the following):

- ART 155 *Introduction to Studio Art: Creative Processes*
- ART 156 *Introduction to Studio Art: Art and the Environment*

Art History course (choose one of the following):

- ART 247 *20th Century Art: Images of the Avant-Garde*
- ART 249 *Art Since 1945: The Road to Modernism*

Media Sequence (choose a two-course sequence from one of these areas):

- Drawing (ART 151, ART 251, ART 255)
- Painting (ART 281, ART 381)
- Printmaking (ART 275, ART 276, ART 375)
- Photography (ART 171, ART 271)
- Sculpture (ART 261, ART 361)
- Computer art (ART 285, ART 385, ART 386)
- Ceramics (ART 165, ART 265)

Studio Elective (choose one of these):

- One additional studio course from those listed above under Media Sequence

Upper Level Seminar Requirement (taken as a capstone experience):

- ART 583 *Advanced Studio Projects*

Art History Minor

The Art History minor requires completion of at least 24 semester hours including:

- One Studio Art course
- ART 110 *Survey of Art History I*
- ART 111 *Survey of Art History II*
- One 200-level course
- One course at the 300- or 400-level
- ART 582 *Seminar: Art History* (or other junior seminar as appropriate)

Special Minors

The Art Department offers courses in support of the following interdisciplinary minors: Art and the Environment, Classical Studies, French Studies, Medieval and Renaissance Studies, and Middle East and North African Studies.

Art Courses

Art History Courses

Note: Art History courses encourage familiarity with area museums, and a museum trip is required of students enrolled in Art History courses.

ART 110 *Survey of Art History I*

An introductory survey of Western art from pre-history to the end of the Middle Ages, including significant non-Western artistic traditions in India, China and the Americas before 1500. Distribution Requirements: HE, IP.

ART 111 *Survey of Art History II*

An introductory survey of Western art from the Renaissance to the early 20th century. Distribution Requirements: HE, IP.

ART 112 *Comics: Words and Images*

An investigation of comic book culture, its origins, evolution, and contemporary practices. To understand the cultural legacy of the comics, students learn the background of European and Asian influences. Topics include the development of the comic strip during the early 20th century, the creation of the comic book, the range of genres in comic books, the influence of the international and underground comix movements, the rise of alternative comics, and the emergence of the graphic novel. Students study the diverse structure, symbolism, and imagery of the sequential pictorial narrative form. The class consists of slide lectures, weekly reading assignments, discussions, in-class reports, and group projects. Distribution Requirements: HE, IP.

ART 212 *Art of Ancient Egypt and the Mediterranean*

A survey of the art and architecture of ancient Egypt from the first flowering of the Old Kingdom through the expansion of empire during the New Kingdom. Artistic production is considered in relation to the political and religious functions of art. The art of the New Kingdom in particular is examined in connection with other Mediterranean cultures of the late Bronze Age, including Hittite, Minoan, and Mycenaean Greek. Discussion topics include visual analysis and changing interpretations of art in light of recent work in archeology. Distribution Requirements: HE, IP.

ART 213 *Art of Ancient Greece and Rome*

A lecture survey of the art and architecture of classical Greece and Rome from ca. 1100 BCE to ca. 300 CE. Emphasis is placed on appearance and content of the arts as they express social, political, and religious values. The artistic productions of these ancient cultures are examined together with the cultural cross-currents from Mediterranean societies such as Assyria, Persia, and late dynastic Egypt that contributed to their development. Artistic themes are considered in relationship to primary historical and literary sources. Distribution Requirements: HE, IP.

ART 215 *Medieval Art: Glorious Visions*

A topical survey of European art from 1000-1400. Students explore art and architecture of a time when visionary ideals and Christian religious inspiration helped artists depict unearthly realities. Topics will include apocalyptic illustration beginning

Art

around the year 1000, the pilgrimage cults of saints and relics, the rise of the great cathedrals, and the development of Gothic style in secular and sacred arts through the year 1400. Distribution Requirements: HE, IP.

ART 222 *Nature and Society*

A survey of art and architecture from its earliest manifestations through the mid-20th century, focusing on our relationship to nature and the built environment. The course will emphasize works of art, literature, theology, philosophy and natural history that provide a context for our ideological understanding of our environment. Possible topics will include Earth, Temple, God and Goddess; City and Country in the Classical World; The City of God vs. The Garden of Eden; Chinese Landscape; Landscape Painting in the West; Our Built Environment. Distribution Requirements: HE, IP.

ART 223 *Far Eastern Art*

A survey of art and architecture in Asia, including Indochina, India, China, Korea, and Japan. Lectures and readings concern such topics as the influence of Buddhism, Hinduism, and Islam on Southeast Asian and Indian art and architecture; the significance of Confucianism and Taoism in Chinese painting; the concept of feng shui as a central precept of Chinese architecture; the impact of European colonialism on Chinese and Japanese culture; the relationship of Japanese and Korean art to Chinese models; and the evolution of Japanese samurai culture in the Momoyama and Edo periods. Distribution Requirements: HE, IP.

ART 225 *Art of the Italian Renaissance*

Lectures and readings in the history of painting, sculpture, and architecture in Italy from 1400 to 1600. Emphasis is placed on the social and political dynamics of ideas of cultural rebirth during the 15th and 16th centuries. Distribution Requirements: HE, IP.

ART 231 *Art of the Northern Renaissance*

A survey of the major artists of northern Europe from 1400 to 1600. The course emphasizes the stylistic and technical innovations of northern art as an outgrowth of late Medieval tendencies in the context of social, political and religious changes during the 15th and 16th centuries. Distribution Requirements: HE, IP.

ART 236 *German Art from the Middle Ages to Today*

A survey of German Art from the Middle Ages to the present. Emphasis is placed on the social, political, and religious contexts that contributed to the creation of the art works. Special use is made of the galleries, museums, and the annual Kunstmesse in Cologne to teach the course and to introduce some aspects of the art market. *Taught in Cologne, Germany.*

ART 241 *19th-Century European Art: From Academy to Atelier*

A topical survey of European art from Neo-Classicism to Impressionism (1750-1880). Students study the evolution of early modernism through lectures and readings. Topics include the life and death of history painting; the rise of landscape painting; social and political issues in the visual arts; the role of gender in the arts; and the growing interaction between mass culture and avant-gardist art. Distribution Requirements: HE, IP.

ART 245 *American Art and Architecture*

A survey of American painting, sculpture, and architecture from colonial times to 1940. Emphasis is placed on the strong, yet ambiguous relationship of American art to European culture and the growth of an American consciousness in the arts. Distribution Requirements: HE, IP.

ART 247 *20th-Century Art: Images of the Avant-Garde*

A topical survey of European and American art from Post-Impressionism to Surrealism (1880-1945). Students study the different visions of modernism through lectures and readings. Topics include urbanization and its effect on modernist subject matter; Fin-de-Siècle views of modernist society; technical experimentation in modernist painting and sculpture; utopian concepts in modernist art movements; and alternative art experiences in modernism. Distribution Requirements: HE, PD.

ART 249 *Art Since 1945: The Road to Post-Modernism*

A topical survey of European and American art since the end of World War II. Students study the diversity of contemporary art movements and events through lectures and readings. Topics include the changing conceptions of avant-gardism; the

Art

decline of modernism in contemporary society; the role of gender, race, and class in the evolution of postmodernist art; and the interplay between popular culture and the fine arts in post-modernism. *Prerequisite: Any Art History course or permission of instructor.* Distribution Requirements: HE, PD.

ART 330 The Renaissance Woman

A seminar examining women as subjects, patrons and producers of art in the Renaissance period (1350-1550). Art works are analyzed in the context of the Christian tradition, the revival of classicism, and the changing religious and social values of those years. Traditional art-historical methodologies as well as feminist critical insights are used. *Prerequisite: Any 200-level Art History course or permission of the instructor.* Distribution Requirements: HE, PD.

ART 341 Art in Rebellion

A seminar examining the concept of revolution as an integral part of modern art movements. Students critically examine the notion of the avant-garde through a study of the historical context of modernist movements, including artists' statements, criticism, literature, music, film, and theory. These cultural elements are also placed within a larger social and political framework in order to analyze and assess all the aspects of revolutionary tendencies in modernist discourse. Topics vary, including art as radical politics, the impact of technology on the arts, the concept of anti-art, the experimentation with new art form, and the blurring of boundaries between high art and popular culture. *Prerequisite: ART 111.* Distribution Requirements: HE, PD.

ART 520 Internship: Erie Art Museum

An internship for students with adequate preparation in art history that enables them to become familiar with the operations of an art museum, including day-to-day administration, preparation of special exhibits, and interaction with the professional art world. In addition to duties assigned by the museum, the student keeps a journal and writes a research paper. Special projects can be developed as appropriate to student capabilities and the museum's schedule. The intern is evaluated by the Museum Director and the supervising faculty member. *Prerequisite: Approval of the faculty advisor and Museum Director.* Credit: One to four semester hours.

ART 523 Internship: Gallery or Museum

An internship that enables students to become familiar with the operations of an art gallery or an historical museum, including day-to-day administration, preparation of special exhibitions, and interaction with the professional gallery and museum world. In addition to duties assigned by the gallery or museum personnel, the student keeps a journal and writes a research paper. Special projects can be developed as appropriate to student capabilities and the institution's schedule. The intern is evaluated by the Gallery or Museum Director and the supervising faculty member. Credit: One to four semester hours. *Prerequisite: Approval of the faculty advisor and Gallery or Museum Director.*

ART 529 Internship: Art

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

ART 582 Seminar: Art History

Junior Seminar. Seminar discussions and written assignments on problems and methods in the history of art in preparation for the development of senior research topics. Required of all majors and minors in Art History. Must be taken on the letter grade basis.

ART 600 Senior Project I: Art History

Preparation of a proposal, thesis, and preliminary bibliography for the Senior Project. Credit/No Credit grade only. Credit: Two semester hours. *Prerequisite: ART 582 or permission of instructor.*

ART 610 Senior Project II: Art History

Completion of a research project in art history approved by the department. *Prerequisite: ART 600. Must be taken on the letter grade basis.*

Studio Art Courses

ART 151 Drawing I

An introductory course in drawing, including a variety of mediums and projects to develop discernment in observation, skill in execution, and an understanding of drawing as an art form. Coursework integrates effective oral and written communication to explore contemporary and historical practices within the medium and the role of art in human experience. Distribution Requirements: HE, ME.

ART 155 Introduction to Studio Art: The Creative Process

An introduction to studio art that includes studio projects in two and three dimensions, readings, and discussions which unite the process of making art with an exploration of some ideas and imaginative sources which contribute to the world of the visual artist. Coursework integrates effective oral and written communication to explore contemporary and historical practices within the medium and the role of art in human experience. Distribution Requirements: HE, ME.

ART 156 Introduction to Studio Art: Art and the Environment

An introduction to studio art that explores the relationship between art and the environment, including the role of the artist in an environmental era. We focus on several areas, including the natural environment, our urban-industrial environment, the architectural environment, and how to make art within their context. Projects include both two- and three-dimensional explorations, as well as social sculpture, installation, and environmentally sited works. Coursework integrates effective oral and written communication to explore contemporary and historical practices within the medium and the role of art in human experience. Distribution Requirements: HE, ME.

ART 165 Ceramics I

An introduction to hand-formed ceramics and to pinching, coiling, slab, and other off-the-wheel techniques. Basic ceramic chemistry and kiln firing practices are also covered. Coursework integrates effective oral and written communication to explore contemporary and historical practices within the medium and the role of art in human experience. Distribution Requirements: HE, ME.

ART 171 Photography I

An introduction to photography as a potent form of artistic visual communication. Contemporary and historical trends, techniques, and thematic content are covered, with an emphasis on proficiency with craft. Hands-on assignments, readings, lectures, and discussions provide a broad survey of image analysis strategies, help students learn technical basics, make informed choices about materials and processes, and articulate their own creative ideas. The course requires a 35 mm film camera with manually adjustable apertures and shutter speeds. Coursework integrates effective oral and written communication to explore contemporary and historical practices within the medium and the role of art in human experience. Distribution Requirements: HE, ME.

ART 251 Figure Drawing I

Development of an understanding of the human figure and of the graphic ability to express it effectively. Coursework integrates effective oral and written communication to explore contemporary and historical practices within the medium and the role of art in human experience. *Prerequisite: ART 151 or permission of instructor.* Distribution Requirements: HE, ME.

ART 255 Drawing II

A further development of the work in ART 151 with a greater emphasis on drawing as an art form. Coursework integrates effective oral and written communication to explore contemporary and historical practices within the medium and the role of art in human experience. *Prerequisite: ART 151 or permission of instructor.* Distribution Requirements: HE, ME.

ART 261 Sculpture I

A beginning level course covering traditional as well as contemporary forms of sculptural expression. Considerations of form, space, and scale, as well as the significance of materials and process are explored. Projects involve clay modeling, wood construction, carving, and mixed media. Coursework integrates effective oral and written communication to explore

Art

contemporary and historical practices within the medium and the role of art in human experience. *Prerequisite:* Any 100-level Studio Art course or permission of instructor. Distribution Requirements: HE, ME.

ART 265 Ceramics II

A continuation of the study of ceramics beyond the basic course. Problems aimed toward the development of more individual approaches and solutions. Coursework integrates effective oral and written communication to explore contemporary and historical practices within the medium and the role of art in human experience. *Prerequisite:* ART 165. Distribution Requirements: HE, ME.

ART 271 Photography II

The development of photographic projects in color, digital, or advanced black-and-white photography. Emphasis on photographic concepts and practice as artistic and visual communication. Coursework integrates effective oral and written communication to explore contemporary and historical practices within the medium and the role of art in human experience. *Prerequisite:* ART 171. Distribution Requirements: HE, ME.

ART 275 Printmaking: Relief and Etching I

An introduction to printmaking as an art form concentrating on relief and etching techniques. Linocut, line etching, aquatint, and color techniques will be explored through studio projects. Coursework integrates effective oral and written communication to explore contemporary and historical practices within the medium and the role of art in human experience. Distribution Requirements: HE, ME.

ART 276 Printmaking: Lithography I

An introduction to printmaking as an art form with emphasis on the drawing, processing and printing of lithographs. Studio projects will stress the creation of effective lithographic images. Coursework integrates effective oral and written communication to explore contemporary and historical practices within the medium and the role of art in human experience. Distribution Requirements: HE, ME.

ART 281 Painting I

A study of the fundamentals of painting in oils or acrylics. The preparation of supports and grounds, indirect and direct methods of painting, color organization, composition and artistic expression are presented through studio projects. Historical background on painting in the 20th century is introduced. A field trip to an area art museum is required. Coursework integrates effective oral and written communication to explore contemporary and historical practices within the medium and the role of art in human experience. *Prerequisite:* One studio course from ART 151, ART 155, ART 156 or permission of instructor. Distribution Requirements: HE, ME.

ART 285 Electronic & Intermedia Art I

An introduction to using electronic technologies and alternative media as art-making tools. Students integrate emerging and established electronic technologies such as sensing environments, digital image/sound/video/visualization manipulation, and data collection tools into artistic practice. We explore cyberculture, wearable computing, social media, mobile apps, and augmented reality, utilizing electronics and emerging technologies in innovative and unexpected ways. Coursework integrates effective oral and written communication to explore contemporary and historical practices within the medium and the role of art in human experience. Distribution Requirements: HE, ME.

ART 351 Figure Drawing II

Further development toward understanding the human figure and the graphic ability to express it effectively. May be taken for 2 or 4 credits. Coursework integrates effective oral and written communication to explore contemporary and historical practices within the medium and the role of art in human experience. *Prerequisite:* ART 251. Distribution Requirements: HE, ME.

ART 361 Sculpture II

A continuation of problems explored in ART 261 with concentration on the development of individual ideas and processes. Coursework integrates effective oral and written communication to explore contemporary and historical practices within the medium and the role of art in human experience. *Prerequisite:* ART 261. Distribution Requirements: HE, ME.

ART 365 Ceramics III

Advanced studio work in ceramics. Coursework integrates effective oral and written communication to explore contemporary and historical practices within the medium and the role of art in human experience. *Prerequisites: ART 165 and ART 265.* Distribution Requirements: HE, ME.

ART 375 Printmaking II

Advanced problems in printmaking. Coursework integrates effective oral and written communication to explore contemporary and historical practices within the medium and the role of art in human experience. *Prerequisite: ART 275 or ART 276.* Distribution Requirements: HE, ME.

ART 381 Painting II

Development of expressive ideas in oils, acrylics, and water color. Special attention is given to art movements in the 20th century, the concepts that characterize them, and the artists who are involved. Coursework integrates effective oral and written communication to explore contemporary and historical practices within the medium and the role of art in human experience. *Prerequisite: ART 281.* Distribution Requirements: HE, ME.

ART 385 Electronic & Intermedia Art II

Advanced study of new-media and intermedia art with an emphasis on the creation of work integrating digital systems with physical bodies. Through an interactive approach, students develop projects that explore networked interactions, wearable computing, social media, augmented reality, and related technologies. Media and technological criticality are essential elements of our study, which pursues creative deployment of technological tools and media in art making. Coursework integrates effective oral and written communication to explore contemporary and historical practices within the medium and the role of art in human experience. *Prerequisite: ART 285.* Distribution Requirements: HE, ME.

ART 386 Internet Art

An introduction to using the Internet as a tool for art creation. Students explore the interrelationships between physical experiences and the digital world. Projects explore interactivity, networked wearable computing, gaming, social media, mobile apps, augmented reality, and cyberculture. Emphasis is placed on technological and media criticality in creating socially minded works of art. Coursework integrates effective oral and written communication to explore contemporary and historical practices within the medium and the role of art in human experience. *Prerequisite: ART 285.* Distribution Requirements: HE, ME.

ART 521 Internship with the French Creek Project

An internship in illustration for publications for the French Creek Project. This internship is ideal for the student who has an interest in drawing for publications, in combining interests in science, art, and the environment, and in learning about the relationship between illustrator and client. The internship 1) acquaints the student with the French Creek project and the services it provides; 2) demonstrates the connection between drawing for oneself and drawing for others; and 3) involves the student in creating illustrations appropriate in both concept and technique for publication. The intern meets regularly with the project director and the internship faculty liaison to review drawings, discuss what is needed for the variety of issues addressed in the publication, and to review and reflect upon the results of these experiences. Performance is evaluated by the faculty liaison in consultation with the project director. Must be taken for credit, and may be repeated. Credit: Two to four semester hours. Credit: Two to four semester hours. *Prerequisites: Art 151, ART 251, or ART 155; approval of the supervising faculty member.*

ART 522 Art Teaching Internship

This internship is designed to introduce and exemplify art's capacity for allowing and encouraging connection to community as well as art's ability to augment personal development in both students and teachers. This internship is ideal for the student who has an interest in teaching art, incorporating art into a general classroom curriculum, or in art therapy. The internship will: 1) acquaint the student with the concept of a community youth center and the services it provides; 2) facilitate the connection between the making of one's own art and the teaching of art; 3) involve the intern in the planning and implementation of appropriate art experiences; and 4) require that the intern read and research traditional and current trends in art education. The intern will meet regularly with the agency director for discussion and supervision as well as weekly conferences with the internship instructor to review assigned readings, discuss the design of classroom experiences, and then review and reflect upon the results of those experiences. Performance will be evaluated by the on-site supervisor

Art

in consultation with internship faculty. In addition, the supervising faculty will evaluate the student's written work consisting of a journal integrating the on-site experiences with the assigned readings and a research paper. Must be taken for credit and may be repeated. Credit: Two to four semester hours. *Prerequisites: ART 151, ART 155 or ART 156, and ART 261.*

ART 529 Internship: Art

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

ART 580 Junior Seminar

Preparation for advanced, independent work in studio art for art majors only. In addition to independent studio work, this seminar includes readings in contemporary art and covers proposal writing, the role of history in the art-making process, and how to write an artist's statement. It is designed to help prepare art majors for the Senior Project. Required of all studio majors in the junior year. Must be taken on the letter grade basis. *Prerequisites: Two Studio Art courses and one Art History course.*

ART 583 Advanced Studio Projects

Advanced projects and group discussions. This class is designed to help students develop more independent studio work. Highly recommended as a follow-up to Art 580 for majors preparing for the Senior Project. Required of all minors in studio art. Also recommended that students complete the media sequence before enrolling. Must be taken on the letter grade basis. *Prerequisites: Two Studio Art courses and one Art History course.*

ART 590 Independent Study

For upper-class students who are qualified to do work outside the scope of regularly scheduled courses.

ART 620 Senior Project: Studio Art

Must be taken on the letter grade basis.

Art and the Environment

Professors Geffen (Program Coordinator), Eatmon, and Rich

An interdivisional minor in which the student creatively confronts environmental issues. Students explore questions raised about the natural and cultural environments and combine that knowledge with experience acquired from immersion in various artistic and creative endeavors to imagine, construct or draw attention to possible solutions to contemporary environmental problems.

Learning Outcomes

Students who successfully complete a minor in Art and the Environment should be able to:

1. Integrate knowledge from within contemporary ecoart practices, environmental studies, and cultural activism with a goal of developing original solutions to local environmental and community challenges;
2. Actively engage in development of community-based and/or ecoart solutions to local problems;
3. Exhibit familiarity with contemporary ecoart and community-based theory and practice.

The Art and the Environment Minor

ENVSC 110 *Introduction to Environmental Science* and ART 156 *Introduction to Studio Art: Art and the Environment* must be taken at the outset. Additional courses are to be chosen from each of three categories, including Scientific Perspectives, Social Issues, and Creative Arts. The synthesis course ARTEN*301 *Envisioning Environmental Futures* must be taken as the culminating experience. A minimum of 24 credits is required for the minor. When appropriate, alternative courses may be used to fulfill the requirements below and must be negotiated in consultation with the student's advisor and the minor steering committee. Potential substitutions should be negotiated before they are undertaken.

Because this minor is interdivisional, students may complete any major to satisfy the college requirement that the major and minor be in different divisions.

Requirements (24 credits minimum):

1. **Foundation sequence. Take BOTH of the following courses:**
 - ENVSC 110 *Introduction to Environmental Science* (offered each semester)
 - ART 156 *Introduction to Studio Art: Art and the Environment* (offered once per year, typically in the Fall semester)
2. **Perspectives sequence: take one course from each of the three following categories.** (Note: Special Topics classes may provide appropriate substitutions and students may petition the coordinator as needed *in advance* of taking the class)
 - a. Scientific Perspectives: (choose one)
 - BIO 045 *Biology of the Algae*
 - BIO 220 *Organismal Physiology/Ecology*
 - BIO 330 *Population and Community Ecology*
 - BIO 332/ENVSC 332 *Forest Ecosystems and Management*
 - BIO 335/ENVSC 335 *Conservation Biology*
 - BIO 344/ENVSC 344 *Stream Ecology*
 - BIO 346/ENVSC 346 *Wetlands*
 - ENVSC 210 *Environmental Research Methods*
 - GEO 110 *Physical Geology*
 - GEO 120 *Earth History and Evolution*
 - b. Social Perspectives: (choose one)
 - COMJ 160 *Introduction to Community and Justice Studies*
 - COMRT 120 *Media and Society*
 - ECON 238 *Poverty, Inequality, and Efficiency*
 - ECON 240 *Managerial Economics*
 - ECON 256 *Economic Development*

Art and the Environment

- ENGL 209 *Literature About the Environment*
- ENVSC 250 *Environmental Education*
- ENVSC 305 *Environmental Spatial Analysis*
- ENVSC 350 *Ecological Economics*
- ENVSC 352 *Environmental Justice*
- ENVSC 360/RELST 360 *Religion and Ecology*
- ENVSC 380 *Climate and Energy Policy*
- GHS 130 *Introduction to Global Health*
- HIST 571 *The Civil Rights Movement*
- PHIL 140 *Ethics and Community*
- PHIL 230 *Science in its Cultural Setting*
- PHIL 285 *Business and Management Ethics*
- PSYCH 375 *Community Psychology*
- c. Creative Arts: (choose one)
 - ART 151 *Drawing I*
 - ART 165 *Ceramics I*
 - ART 171 *Photography I*
 - ART 261 *Sculpture I*
 - ART 281 *Painting I*
 - ART 285 *Electronic & Intermedia Art I*
 - COMRT 202 *Modes of Film and TV Production*
 - COMRT 230 *Production Design I*
 - COMRT 285 *Visual Production I*
 - COMRT 277 *Video Activism: History, Theory, Politics and Practice*
 - ENGL 205 *Writing Fiction*
 - ENGL 206 *Writing Poetry*
 - ENGL 210 *Writing Nonfiction*
- 3. **Capstone course.** Take ARTEN 301 *Envisioning Environmental Futures* (offered in alternate years)

Art and the Environment Courses

ARTEN 301 *Envisioning Environmental Futures*

An interdisciplinary exploration of contemporary environmental issues that affect community vitality and environmental resilience, including impacts on both the natural and human-made environments. Drawing upon literature from within the fields of community design, environmental restoration and/or remediation, landscape architecture, ecological art, digital and social media, and community activism, students examine a local/regional environmental problem and collaborate on finding arts-based solutions for that problem. Design of the collaborative project and potential solutions requires integration of art, science, theories of change, and community planning. Topics vary based on identification of relevant local/regional projects. *Prerequisites:* ART 156, ENVSC 110, and permission of the instructor or completion of the other coursework for the Art and Environment minor. Distribution Requirements: CL, ME.

ARTEN 529 *Internship: Art and the Environment*

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite:* permission of instructor.

Biochemistry

Professors Deckert (Program Coordinator), Coenen, Garcia, Hersh, Humphreys, Kleinschmidt, Murphree, Nelson, Serra

Biochemistry is the science at the interface of Biology, Chemistry, and Physics that deals with the chemical composition of living matter and the molecular nature and physical processes of living systems. The Biochemistry major is part of an interdisciplinary program primarily supported by faculty from the Biology and Chemistry departments. The major is considered a Natural Sciences major. There is no Biochemistry minor.

Biochemistry Learning Outcomes

Students who successfully complete a major in Biochemistry are expected to be able to:

- Demonstrate a broad knowledge of the fundamental introductory concepts of Chemistry, Biology and Physics;
- Demonstrate a thorough knowledge of the intersection between the disciplines of Biology and Chemistry;
- Demonstrate a proficiency in developing relevant biochemical questions, carrying out laboratory investigations to answer those questions, and critically analyzing, interpreting, and presenting in oral and written form the results of their experiments;
- Locate, critically analyze, interpret, and discuss data, hypotheses, results, theories, and explanations found in the primary literature, applying knowledge from Chemistry and Biology;
- Appreciate the way in which practitioners in the disciplines of Biology and Chemistry intersect and bring their expertise to bear in solving complex problems involving living systems;
- Understand the societal impacts, both positive and negative, of science and technology and the limitations of science.

The Biochemistry Major

The Biochemistry major requires a group of introductory and upper level courses from the Biology, Chemistry, Physics, and Mathematics Departments. In addition, majors must take the Junior Seminar offered by one of the participating departments (BIO 580 or CHEM 584). Students may choose an area of specialty within the major via additional electives and the selection of an appropriate Senior Project (BCHEM 600 and BCHEM 610). No courses required for the major may be taken on a Credit/No Credit basis.

Requirements:

1. MATH 160 *Calculus I*. Placement into MATH 170 satisfies the MATH 160 requirement for the major.
2. MATH 170 *Calculus II*
3. PHYS 110 (or PHYS 101) *Introductory Physics I*. When scheduling permits, students are strongly encouraged to enroll in PHYS 110 rather than PHYS 101. Note that enrollment in PHYS 110 is limited to first and second year students.
4. BIO 220 *Organismal Physiology and Ecology*
5. BIO 221 *Genetics, Development, and Evolution*
6. BIO 305 *Molecular Biology*
7. CHEM 120 (or CHEM 110) *Introductory Chemistry I*. Placement into CHEM 122 (or CHEM 112) satisfies the CHEM 120 (or CHEM 110) requirement for the major.
8. CHEM 122 (or CHEM 112) *Introductory Chemistry II*
9. CHEM 231 *Organic Chemistry I*
10. CHEM 242 *Physical Chemistry*
11. CHEM 253 *Introductory Biochemistry*
12. FSBIO 201 *Investigative Approaches in Biology* or FSCHE 201 *Research Methods in Chemistry*
13. 6 credits of upper-level Biology and Chemistry electives, one each from Biology and Chemistry*:
 - A. Upper-Level Elective Options: Biology
 - BIO 310 *Microbiology*
 - BIO 320 *Cell Biology*
 - BIO 325 *Genetics*
 - BIO 360 *Plant Physiology*

- B. Upper-Level Elective Options: Chemistry
 - CHEM 355 *Biochemical Metabolism*
 - CHEM 357 *Macromolecular Synthesis*
 - CHEM 361 *Instrumental Analysis*
 - CHEM 432–CHEM 439 *Current Topics in Organic Chemistry*
 - CHEM 452–CHEM 459 *Current Topics in Biochemistry*
 - CHEM 462–CHEM 469 *Current Topics in Analytical Chemistry*
- 14. Junior Seminar (CHEM 584 or approved section of BIO 580)
- 15. Senior Project I and II (BCHEM 600 and BCHEM 610)

*Please note that many of the upper-level electives have pre-requisites that must be satisfied prior to enrollment.

Biochemistry Courses

BCHEM 529 Internship: Biochemistry

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

Note: A student's Senior Project Committee must include representation from each of the two affiliated departments (Biology and Chemistry).

BCHEM 600 Senior Project I

Development of individual senior research projects in group and individual meetings with the project advisor and other appropriate faculty members. Pertinent literature is examined in order to identify proper experimental approaches, designs, techniques, and methods of data analysis. Oral and written research proposals and progress reports are presented and discussed. Credit: Two semester hours. *Prerequisites: Intended for Biochemistry majors, seniors only.*

BCHEM 610 Senior Project II

A continuation of BCHEM 600. Group and individual meetings are held to evaluate the progress of individual student research projects. Emphasis is placed on data analysis and interpretation, and on modes of presentation of research findings. Students complete a written thesis and oral defense before a board of biochemistry faculty. Credit: Four semester hours. *Prerequisites Successful completion of BCHEM*600. Intended for Biochemistry majors. Seniors only.*

Biology

Professors French (Chair), Coates, Coenen, Dawson, Donmoyer, Hersh, Humphreys, Kleinschmidt, Lundberg, Mumme, Nelson, Ostrofsky, Rankin, Venesky, Webb, Whitenack, Wissinger

Biology, the study of life, is a discipline of astonishing variety. It encompasses not only the diversity of living things on the earth today, but also the diversity of levels (from molecules to cells to organisms to ecosystems) at which life can be studied. The Biology Department offers a modern, balanced, and comprehensive treatment of biology, emphasizing independent research, analysis of information, and integration among its subdisciplines and with other areas of the liberal arts, including related disciplines such as chemistry, mathematics, geology, physics and psychology. Many new discoveries in biology, such as those that are making genetic engineering a reality, are radically transforming our perception of what biology is and what it can mean to our everyday lives. More than ever, the social, political, economic and moral implications of these discoveries require not only that a liberally educated person understand the principles of modern biology, but also that a biologist be liberally educated.

Biology Learning Outcomes

Learning Outcomes for the Biology Major:

Students who successfully complete a major in Biology are expected to be able to:

1. Demonstrate a general understanding of the central features of the extraordinarily diverse and expanding landscape of modern biology;
2. Demonstrate a general understanding of the standard laboratory tools, methodology, and process of biological research, and the basics of scientific writing;
3. Demonstrate a thorough understanding of important principles and laboratory techniques in at least three different biological sub-disciplines within the general areas of (1) cellular and molecular biology, (2) organismal biology and physiology, and (3) population biology and ecology;
4. Demonstrate the ability to locate, critically analyze, interpret, and discuss primary research literature in one or more sub-disciplines within the biological sciences;
5. Design and conduct independent laboratory or field research that is consistent with the highest standards and practices of research in the relevant biological sub-discipline;
6. Present the results of their independent research clearly and effectively in both written and oral forms;
7. Be well prepared for post-graduate education and diverse and meaningful careers in and out of the biological sciences.

Learning Outcomes for the Biology Minor:

Students who successfully complete a minor in Biology are expected to be able to:

- a) Demonstrate a general understanding of the central features of the extraordinarily diverse and expanding landscape of modern biology;
- b) Demonstrate a general understanding of the standard laboratory tools, methodology, and process of biological research and of the basics of scientific writing;
- c) Present the results of research clearly and effectively in both written and oral forms;
- d) Demonstrate a thorough understanding of important principles and/or laboratory techniques in at least two different biological sub-disciplines.

Learning Outcomes for Biology Courses:

Students who successfully complete a course for non-majors (BIO 045–BIO 082) in the Department of Biology are expected to be able to:

- a) Demonstrate a general understanding of the basic principles of the relevant biological sub-discipline and of the process by which new scientific knowledge in this sub-discipline is generated.

Students who successfully complete the introductory courses (BIO 220–BIO 221) in the Department of Biology are expected to be able to:

- b) Demonstrate a general understanding of the central features of the extraordinarily diverse and expanding landscape of modern biology.

Students who successfully complete the sophomore-level investigative laboratory course (FSBIO 201) in the Department of Biology are expected to be able to:

- c) Demonstrate a general understanding of the standard laboratory tools, methodology, and process of biological research and of the basics of scientific writing;
- d) Present the results of independent research clearly and effectively in both written and oral forms.

Students who successfully complete a 300-level course (BIO 300–BIO 385) in the Department of Biology are expected to be able to:

- Demonstrate a thorough understanding of important principles and/or laboratory techniques in the biological sub-discipline covered by the course.

Students who successfully complete a junior seminar (BIO 580) in the Department of Biology are expected to be able to:

- Demonstrate the ability to locate, critically analyze, interpret, and discuss primary research literature in the relevant sub-discipline within the biological sciences;
- Design independent laboratory or field research that is consistent with the highest standards and practices of research in the relevant biological sub-discipline.

Students who successfully complete the two-semester senior project and seminar (BIO 600 and BIO 610) in the Department of Biology are expected to be able to:

- Design and conduct independent laboratory or field research that is consistent with the highest standards and practices of research in the relevant biological sub-discipline;
- Present the results of their independent research clearly and effectively in both written and oral forms.

The Biology Major

The major in Biology leads to the Bachelor of Science degree and requires the successful completion of 34 semester credit hours in Biology, including the following **requirements**:

1. BIO 220 *Organismal Physiology and Ecology*
2. BIO 221 *Genetics, Development and Evolution*
3. FSBIO 201 *Investigative Approaches in Biology*
4. Three 300-level biology courses, one from each of the three areas defined below:
 - A. Area A - Cellular and Molecular Biology
 - BIO 300/CMPSC 300 *Introduction to Bioinformatics*
 - BIO 305 *Molecular Biology*
 - BIO 320 *Cell Biology*
 - BIO 325 *Genetics*
 - Appropriate courses at the Duke University Marine Laboratory (e.g., Biochemistry of Marine Animals, Molecular and Cellular Processes in Marine Organisms) may also be used to satisfy the Area A requirement.
 - B. Area B - Organismal Biology and Physiology
 - BIO 310 *Microbiology*
 - BIO 350 *Immunology*
 - BIO 360 *Plant Physiology*
 - BIO 365 *Comparative Anatomy*
 - BIO 375 *Medical Entomology*
 - BIO 380 *Animal Physiology*
 - Appropriate courses at the Duke University Marine Laboratory (e.g., Marine Invertebrate Zoology, Physiology of Marine Animals, Coastal Ecotoxicology, Environmental Biochemistry) may also be used to satisfy the Area B requirement.
 - C. Area C - Population Biology and Ecology
 - BIO 301 *Physiological Ecology*

- BIO 321/GHS 321 *Epidemiology*
 - BIO 330 *Population and Community Ecology*
 - BIO 331/GEO 331 *Paleobiology*
 - BIO 335/ENVSC 335 *Conservation Biology*
 - BIO 340 *Evolution*
 - BIO 344/ENVSC 344 *Stream Ecology*
 - BIO 346/ENVSC 346 *Wetlands*
 - BIO 370/ENVSC 370 *Insect Ecology and the Environment*
 - Appropriate courses at the Duke University Marine Laboratory (e.g., Marine Ecology, Biological Oceanography, Marine Mammals, Ocean Ecosystems, Barrier Island Ecology, Estuarine Ecosystems) may also be used to satisfy the Area C requirement.
5. A junior seminar (BIO 580)
 6. Two semesters of senior project (BIO 600 and BIO 610).

To obtain the necessary prerequisites for required Biology courses as well as to gain an adequate understanding of modern Biology, **a major must also complete:**

7. MATH 160 *Calculus I* (or MATH 157 and MATH 158).
8. CHEM 110 *Principles of Chemistry 1* or CHEM 120 *Chemical Concepts 1*
9. CHEM 112 *Principles of Chemistry 2* or CHEM 122 *Chemical Concepts 2*
10. CHEM 231 *Organic Chemistry I: Form and Function*
11. Two additional four-credit courses in cognate disciplines in the sciences that complement the student's subdisciplinary interest in Biology and are determined in consultation with a Biology academic advisor. Courses numbered in the 190's may not be used to fulfill the two-course requirement. The following courses may be used in fulfilling the two-course requirement:
 - Biostatistics (BIO 385)
 - Chemistry courses at the 200-level or higher (except CHEM 231)
 - Computer Science at the 100-level or higher (except BIO 300/CMPSC 300)
 - Geology courses at the 100-level or higher (except BIO 331/GEO 331)
 - Mathematics courses (MATH 170 or higher)
 - Physics courses, specifically PHYS 101, PHYS 102, PHYS 110, or PHYS 120

In addition, BIO 385 (or another course in statistics) is highly recommended for Biology majors.

All courses required for the major must be taken for a letter grade. Biology courses exceeding the minimum requirements for the major may be taken on a Credit/No Credit basis, but the department recommends that the number of Credit/No Credit courses be kept to a minimum. Majors are required to have a GPA of at least 2.0 in Biology at graduation. All Biology courses taken for a letter grade at Allegheny, including FS BIO 201, are included in the calculation, with the exception of repeated courses for which only the most recent grade counts.

The Biology Minor

A minor in Biology must comprise 20 semester credit hours in Biology, including the following **requirements:**

1. BIO 220 *Organismal Physiology and Ecology*
2. BIO 221 *Genetics, Development and Evolution*
3. FS BIO 201 *Investigative Approaches in Biology*
4. Two 300-level biology courses, at least one of which must be a laboratory course

In order to obtain an adequate understanding of modern biology, **a Biology minor must also complete 8-12 semester credit hours in chemistry courses, including:**

5. CHEM 110 *Principles of Chemistry 1* or CHEM 120 *Chemical Concepts 1*
6. CHEM 112 *Principles of Chemistry 2* or CHEM 122 *Chemical Concepts 2*
7. CHEM 231 *Organic Chemistry I: Form and Function*

All courses required for the Biology minor must be taken for a letter grade.

Off-Campus Study in Marine Biology

Students who are eligible (GPA of at least 3.0 and approval of Director of International Education) can participate in our cooperative program with the Duke University Marine Laboratory in Beaufort, North Carolina. Students typically participate for one semester in the junior year and take a full course load including an independent research experience. Students receive Allegheny grades and credit for Biology major (appropriate courses for Areas A, B, C, and Junior Seminar) and minor requirements. The spring program entails one-half semester at Duke and one-half semester at the Bermuda Biological Laboratory. Contact the Director of International Education in the Gateway for more information on this program.

Biology Courses

Courses for Non-Majors

BIO 045 *Biology of the Algae*

An examination of the basic biology of the algae and their role in ecosystems and interrelationships with humans. Local algal flora in area streams and lakes are sampled during field trips and investigated in the laboratory. Topics include ecology, physiology, cellular biology, and taxonomic diversity of the algae, and the effects of algae on the environment and human society. One laboratory per week. Distribution Requirements: QR, SP.

BIO 078 *The Biology of Behavior*

An investigation of biological principles of animal behavior through the study of physiological, genetic, developmental, ecological and evolutionary processes. One laboratory per week. Distribution Requirements: QR, SP.

BIO 082 *Insects and Humans*

A study of the basic biology of insects, with an emphasis on the interrelationships between insects and humans. These interrelationships include the beneficial roles of insects in agriculture, their negative impact as pests and disease vectors, and ways in which insect populations and activities can be controlled. One laboratory per week. Distribution Requirements: SP.

Introductory Courses

BIO 220 *Organismal Physiology and Ecology*

An introduction to the biology of organismal form and function (physiology) and the interaction of organisms with their environment (ecology). We take a comparative approach to the diversity of physiological systems that have evolved in different organisms to meet the environmental challenges that they face (energy, water balance, excretion of wastes, communication, reproduction, gas exchange, defense). We also consider how the interactions between organisms and their physical and biological environment (other organisms) affect the distribution and abundance of populations and ecosystems. Three lectures and one discussion period per week. *Prerequisite: CHEM 110.* Distribution Requirements: QR, SP.

BIO 221 *Genetics, Development and Evolution*

An introduction to the central role of genetics in modern biology. Topics include an examination of how genetic information is expressed and regulated, how it directs organismal development, how it is passed from one generation to the next, and how it is modified via the evolutionary process. Three lectures and one discussion period per week. *Prerequisite: BIO 220.* Distribution Requirements: QR, SP.

Advanced Courses

BIO 300 *Introduction to Bioinformatics (also listed as CMPSC 300)*

An introduction to the development and application of computational approaches to answer biological questions. Students use state-of-the-art bioinformatics software to gain insights into the functionality of the information contained within genomes as well as learn the algorithms behind such applications. Topics include data management, analysis of large-scale biological datasets, genome annotation, and genetics of disease. Unique challenges in the field and the wide range of

existing solutions are examined. One laboratory per week. *Prerequisites: BIO 221 and FSBIO 201, or CMPSC 111.* Distribution Requirements: QR, SP.

BIO 301 Physiological Ecology

A study of the relations of organisms to one another and to their surrounding physical environment, with an emphasis on understanding how physiological traits of animals affect their geographic distributions and interactions with one another. Topics include hormonal control of development, metabolic changes in response to environmental change, physiological costs of reproduction, disease ecology, and physiology of behavior. Labs involve field collections and sampling as well as indoor activities measuring animal physiological responses to various ecological conditions. One laboratory per week.

Prerequisites: BIO 220, BIO 221, and FSBIO 201. Distribution Requirements: QR, SP.

BIO 305 Molecular Biology

A study of the molecular components of replication and gene expression in prokaryotes and eukaryotes. The molecular aspects of gene structure, function, and regulation are emphasized, as are current methods for the study of these topics. One laboratory per week. *Prerequisites: BIO 220, BIO 221, and FSBIO 201 or FSCHE 201.* Distribution Requirements: QR, SP.

BIO 310 Microbiology

A study of the structure, physiology, genetics, and evolution of prokaryotes, viruses, and lower eukaryotes. Emphasis is placed on microbial diversity, interactions among microbes, and interactions of microbes with their environment, including human hosts. Lectures include discussions of papers from the primary literature. One laboratory per week. *Prerequisites: BIO 220, BIO 221, and FSBIO 201 or FSCHE 201.* Distribution Requirements: SP.

BIO 320 Cell Biology

A study of the structure and function of eukaryotic cells. Topics include current methods in cell biology and molecular genetics, the structure and function relationships of major organelles and cytoskeletal elements, interactions between cells, regulation of cell division and cell death, and signal transduction pathways. One laboratory per week. *Prerequisites: BIO 220, BIO 221, CHEM 231, and FSBIO 201 or FSCHE 201.* Distribution Requirements: QR, SP.

BIO 321 Epidemiology (also listed as GHS 321)

A study of the determinants of health and of the patterns and distribution of disease. Students receive an introduction to epidemiology, including its historical origins, main concepts, and methods. Topics include the philosophical and ethical dimensions of epidemiology, data types and interpretation, and differences between association and causation. Students learn some research methodologies, how evidence-based recommendations are formed, and the application of epidemiological information to both social policy and clinical science. *Prerequisite: GHS 130 or permission of the instructor.* Distribution Requirements: QR, SP.

BIO 325 Genetics

A study of the mechanisms of inheritance at the molecular, organismal, and population levels. One laboratory per week. *Prerequisites: BIO 220, BIO 221, and FSBIO 201 or FSCHE 201.* Distribution Requirements: QR, SP.

BIO 330 Population and Community Ecology

A study of the dynamics of populations and how they change with time and interact with other populations of mutualists, competitors, predators, and prey. Students examine the emergent properties of communities (interacting population assemblages) and ecosystems such as diversity, productivity, energy flow, and nutrient dynamics. Laboratories emphasize investigations in local field sites. One laboratory per week. *Prerequisites: BIO 220, BIO 221, FSBIO 201, and either MATH 158 or MATH 160.* Distribution Requirements: QR, SP.

BIO 331 Paleobiology (also listed as GEO 331)

A study of temporal and spatial changes of the Earth's fauna within the context of evolution and geological processes. Our study focuses on analysis and use of paleontological data in evolution, systematics, paleoecology, paleoclimatology, geology, and extinction. Laboratory: one period plus field trips. *Prerequisites: BIO 220 and FSBIO 201, or GEO 120 and FSGEO 201.* Distribution Requirements: QR, SP.

BIO 332 Forest Ecosystems and Management (also listed as ENVSC 332)

A study of forest ecosystems and threats to forests caused by human actions. The course examines fundamental ecological processes that control forest ecosystems and the importance of forests in regional and global environments. Impacts of global warming, forest harvesting, air pollution and improper management will be discussed. Management regimes that result in sustainable forest practices will also be explored. Regional forest issues, as well as national and international forest concerns, will be addressed. Laboratory exercises will examine topics in local forested environments. Laboratory, one period. *Prerequisite:* ENVSC 110, ENVSC210, or a lab-based course in the natural science division. Distribution Requirements: QR, SP.

BIO 335 Conservation Biology (also listed as ENVSC 335)

The study of biological diversity and the increasingly severe effects of human society on populations and communities of wild organisms. Emphasis on local and global patterns of diversity, causes and consequences of declines in diversity, and ways to work with natural or managed systems to maintain or restore diversity. The laboratory emphasizes learning local flora and fauna, investigating local conservation biology issues, and using tools and techniques of wildlife and natural resource management to understand and resolve conservation problems. One laboratory per week. *Prerequisites:* BIO 220, BIO 221, and FSBIO 201 or ENVSC 110. Distribution Requirements: QR, SP.

BIO 340 Evolution

An examination of modern evolutionary biology, focusing on the process and pattern of evolutionary change. Topics include sources of genetic variation, natural selection and adaptation, molecular evolution, speciation, macroevolution, and the reconstruction of evolutionary history. *Prerequisites:* BIO 220, BIO 221, and FSBIO 201. Distribution Requirements: QR, SP.

BIO 344 Stream Ecology (also listed as ENVSC 344)

Study of the physical and biological characteristics of stream ecosystems. The laboratory emphasizes field study of local aquatic habitats. One laboratory per week. *Prerequisites:* BIO 220, BIO 221, and FSBIO 201 or ENVSC 110. Distribution Requirements: QR, SP.

BIO 346 Wetlands (also listed as ENVSC 346)

A study of the ecology and conservation of marshes, swamps, and bogs. Emphasis is on “ecosystem services” (hydrologic filters, pollutant sinks, productivity, biodiversity), on the history of wetlands destruction, and on current regulation and management approaches. One laboratory per week. *Prerequisites:* BIO 220, BIO 221, and FSBIO 201 or ENVSC 110. Distribution Requirements: QR, SP.

BIO 350 Immunology

An introduction to the cellular and molecular basis of vertebrate immune systems. Topics include the components and organization of the immune system, development of the immune system, studies of how organisms mount an immune response, and how the immune response itself can cause disease by being hypo- or hyper-reactive. Discussions of seminal papers from the primary literature and case studies of immune dysfunction are emphasized. Three lectures and one recitation per week. *Prerequisite:* BIO 220. Distribution Requirements: SP.

BIO 360 Plant Physiology

An exploration of plant growth, development, transport processes, and adaptations to the environment. Current molecular, cellular, biochemical, and genetic approaches to the study of plants are emphasized. The laboratory focuses on plant responses to hormones and environmental factors. One laboratory per week. *Prerequisites:* BIO 220, BIO 221, and FSBIO 201 or FSCHE 201; *pre- or corequisite:* CHEM 231. Distribution Requirements: SP.

BIO 365 Comparative Anatomy

Organ systems of chordate animals are studied in relation to evolutionary relationships and adaptive specializations. Two laboratories per week. *Prerequisites:* BIO 220, BIO 221, and FSBIO 201. Distribution Requirements: QR, SP.

BIO 370 Insect Ecology and the Environment (also listed as ENVSC 370)

A study of insects, including those that interfere with efforts to tame natural systems such as agriculture, horticulture, and forestry. We introduce insect biology, methodologies to control pest insects, and how these vary based upon the environment and human requirement. Lectures discuss conventional methods of pest control but delve more deeply into

Biology

biological and cultural control methods, establishing an understanding of integrated pest management programs. Labs introduce pest and beneficial insects found in ecosystems throughout Pennsylvania. A strong foundation in insect ecology and population dynamics allows students to manage ecosystems to decrease pest numbers without increasing chemical input. *Prerequisite: BIO 220 or ENVSC 210 or permission of the instructor.* Distribution Requirements: QR, SP.

BIO 375 Medical Entomology

A study of insects and other arthropods and their impact on human health. We examine insect vectors of human diseases and of diseases of domesticated animals; symptoms of diseases and changes in physiology that occur as the diseases progress; direct effects of insects, such as dermatitis, allergic reactions, and effects of venoms introduced into our bodies; and the treatment and prevention of such health concerns. Meets weekly for three fifty-minute periods and one discussion period. *Prerequisite: BIO 220.* Distribution Requirements: SP.

BIO 380 Animal Physiology

Emphasis is placed on the nervous system and the endocrine system as the two communication systems in the body underlying the regulation of physiological function. Other systems, such as those involved in circulation, respiration, digestion, excretion, and fluid regulation, are discussed, primarily from a cellular perspective. One laboratory per week. *Prerequisites: BIO 220, BIO 221, and FSBIO 201.* Distribution Requirements: QR, SP.

BIO 385 Biostatistics

Introduction to quantitative methods with biological applications. Content includes descriptive statistics, probability distributions, tests of significance and curve fitting techniques. *Prerequisite: MATH 158 or MATH 160.* Distribution Requirements: QR, SP.

Internships

BIO 523 Internship in Conservation Biology with the Erie National Wildlife Refuge (also listed as ENVSC 523)

Liaisons: Professor Wissinger (BIO); Environmental Science Internship Coordinator (ENVSC)

The internship enables the student to become familiar with the operation of a National Wildlife Refuge and participate in activities relating to wildlife conservation. The student, faculty liaison, and Refuge internship coordinator jointly agree on a project that is formalized in a project proposal. Evaluation is in consultation with the Refuge contact and based on a reflective journal, a midterm progress report and literature review, and a final report that includes an analysis of the results of the study. Credit: Two to four semester hours. *Prerequisite: BIO 220.*

BIO 527 Internship in Fisheries Biology with the Pennsylvania Fish Commission (also listed as ENVSC 527)

Liaisons: Professor Wissinger (BIO); Environmental Science Internship Coordinator (ENVSC)

The internship is designed to permit students to gain experience in the operation of a fish culture station and to participate in fishery management practices. In spring, the internship is in cooperation with the Linesville Hatchery near Pymatuning Lake, and in the fall with the Fairview Hatchery on Lake Erie. The student, faculty liaison, and Hatchery internship coordinator jointly agree on a project that is formalized by the student in a project proposal. Evaluation is based on a midterm progress report that includes a literature review, and on a final report that includes an analysis of the results of the study. Credit: Two to four semester hours. *Prerequisite: BIO 220.*

BIO 529 Internship: Biology

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

Advanced Seminars

BIO 580 Junior Seminar

BIO 220, BIO 221 and completion of FSBIO 201 with a grade of C or better are prerequisites for the Biology Junior Seminar. The following courses are sections of BIO 580:

Biology

Animal Behavior

An examination of animal behavior from an ecological and evolutionary perspective. Topics include the genetics and development of behavior, behavioral aspects of resource use and predator-prey relationships, male and female reproductive strategies, parental care, and social behavior. One laboratory per week.

Cellular Neurobiology

An examination of the nervous system at the level of single cells and molecules, with special emphasis on voltage-gated ion channels and ligand-gated receptors. The laboratory uses molecular and electrophysiological techniques to study structure and function of nervous system proteins. One laboratory per week. *Recommended: NEURO 110.*

Disease Ecology

An exploration of host-parasite interactions, highlighting the diverse ecological and evolutionary outcomes of these interactions, as well as the physiological responses that hosts utilize when exposed to parasites. Students examine classic and contemporary topics in the primary literature on disease ecology, including costs of host defenses, the evolution of parasite virulence, parasite co-infections, how the environment mediates the outcome of host-parasite, and the effects of host-parasite interactions on ecosystems. In the laboratory, students learn modern ecological, molecular, and physiological techniques and approaches to studying parasitism in an ecological context. One laboratory per week.

Ecology of Freshwater Wetlands

An examination of the structure and function of local wetland ecosystems and interactions with adjacent aquatic and terrestrial habitats. The laboratory emphasizes field study of hydrologic and chemical analysis, and identification of wetlands flora and fauna. One laboratory per week.

Genetic Analysis

A study of genetic approaches to the investigation of complex biological processes, including animal development, behavior, and disease. Students consider model genetic systems such as the fruit fly, *Drosophila melanogaster*, and how these models can be used to analyze human genetic disorders. The laboratory involves experience with molecular biological methods, techniques of both forward and reverse genetics (e.g., mutagenesis, RNA interference), and molecular mapping of traits. One laboratory per week.

Hormone Disruption

A study of disruption of normal hormone function by known and suspected environmental pollutants. Laboratory and field studies emphasize techniques used to detect hormone disruption in cells, tissues, nerves, and behavior as well as measurement of endocrine disrupters in the environment. One laboratory per week.

Limnology

Study of the physical, chemical, and biological characteristics of lakes and impoundments. The laboratory emphasizes field study of area lakes. One laboratory per week.

Molecular Evolution and Bioinformatics

Explores the fundamentals of evolutionary theory and methodologies with an emphasis on those specific to the analysis of molecular data. Advancements in molecular data collection and analysis will be emphasized, from historical techniques such as DNA-DNA hybridization through current phylogenomics research. The laboratory will provide experience in standard molecular biology techniques and bioinformatics towards the collection and analysis of molecular data in an evolutionary context. One laboratory per week. *Recommended: BIO 305 or BIO 340.*

Oxidative Stress Response

An examination of biotic and abiotic stresses that produce reactive oxygen species in plants and the response mechanisms involved in sensing and reducing these toxic compounds. In the laboratory oxidative stress response is investigated at the proteomic and genomic levels using molecular biological techniques. One laboratory per week.

Pathogenic Bacteriology

An exploration of bacterial pathogens and how they cause disease. Students study principles of pathogenic microbiology, including where disease-causing organisms come from, how they are transmitted to a host, what factors they use to cause

Biology

damage to the host and perpetuate their own survival, how the disease is treated, and how transmission can be prevented. The laboratory focuses on factors contributing to virulence using standard microbiology and molecular biology techniques. One laboratory per week. *Recommended: BIO 305, BIO 310, or CHEM 353.*

Physiology of Reproduction/Behavior

An examination of the physiological bases of animal reproduction and the behaviors that accompany the reproductive process. The laboratory utilizes insects as model systems to examine reproductive behaviors, effects of hormone applications, and effects of gland/organ removal (microsurgery). Additional techniques include tissue culture, as well as the biochemical, radiochemical and immunological identification and quantification of various hormones. One laboratory per week.

Physiology of Vision

An examination of the physiology of vision from the molecular to the organ level. Students focus on retinal function, metabolism, and gene expression using in vitro and in vivo laboratory methods.

Plant-Microbe Interactions

An examination of the interactions between plants and microorganisms, focusing on the molecular physiology of signal exchange in plant microbial symbioses. Laboratory investigations emphasize the modification of plant development by microbial symbionts and provide opportunities to work with genetic model systems and reporter gene analysis. One laboratory per week.

Public Health Surveys & Research Methods

This seminar will focus on research involving human subjects. Unlike work in a laboratory, human subjects research requires the investigator to take into account the behaviors, attitudes, and health status of individuals that are not the focus of the research study. Additionally, there are ethical considerations and legal requirements associated with studying humans. We will discuss these and apply them to our own research. Topics to be covered in this seminar include: development and deployment of valid and reliable surveys; coordination and conduct of focus groups; data collection and analysis; ethical considerations; and the strengths and limitations of human subjects research.

Sensory Neurobiology

An examination of the structure and function of the sensory systems of invertebrates and vertebrates with emphasis on mechanisms at the cellular level. The laboratory provides experience in electrophysiological techniques and computer simulations as they are used to illustrate the function of neurons and sensory organs in a wide variety of experimental animals. One laboratory per week. *Recommended: NEURO 110.*

Signal Transduction

An examination of the central role played by signal transduction pathways in the process of cellular differentiation. Particular emphasis is placed on evolutionarily conserved pathways involved in development in a wide range of organisms, including examples of signaling defects implicated in cancer and other human disorders. The laboratory includes experience in tissue culture, histochemical staining, and fluorescence imaging techniques. One laboratory per week. *Recommended: BIO 305, BIO 320, or BIO 325.*

The Evolution of Shape

An examination of why living and extinct animals are shaped the way they are from an evolutionary and mechanical perspective. Laboratory topics include biomechanics, functional morphology, and how shape is used to explore evolutionary and ecological relationships of both vertebrates and invertebrates. One laboratory per week.

BIO 590 Independent Study

Designed for students who desire to pursue advanced work. Work may consist of experimental laboratory research or of a problem based entirely upon library research. Enrollment only by permission of the department. Arranged by consultation. Credit: One to four semester hours.

BIO 600 Senior Project and Seminar I

Individual senior research projects will be developed in group and individual meetings with the project advisor and other appropriate faculty members. Pertinent literature is examined in order to identify proper experimental approaches, designs, techniques, and methods of data analysis. Oral and written research proposals and progress reports are presented and discussed. Credit: Two semester hours. *Prerequisite: BIO 580.*

BIO 610 Senior Project and Seminar II

A continuation of BIO 600. Group and individual meetings are held to evaluate the progress of individual student research projects. Emphasis is placed on data analysis and interpretation, and on modes of presentation of research findings. Students will complete a written thesis, oral defense, and present their findings at the departmental senior project symposium. Credit: Four semester hours. *Prerequisite: BIO 600.*

Sophomore Seminar

FSBIO 201 Investigative Approaches in Biology

An investigative laboratory course that emphasizes experimental design, modern experimental techniques and instrumentation, analysis and interpretation of data, and written and oral presentation. The course consists of three multi-week project modules designed to illustrate investigative approaches at different levels of biological organization—molecular/cellular, organismal/physiology, and population/ecosystem. There is an emphasis on independent and cooperative laboratory/field work, and on writing and speaking in the sciences. One two-hour recitation/discussion and three-hour lab period per week. Four credits. *Prerequisite: BIO 220. This course is required for Biology majors and minors.*

Black Studies

Professors Boynton, V. Prince (Program Coordinators), Binnington, Christie-Searles, Davis, S. Prince, Ribeiro

Black Studies reflects the breadth and depth of African American experiences and illuminates distinctive pathways to understanding oneself in relationship to the world. The program acknowledges the vitality of African heritages while also recognizing the contingency of Black experiences in the Americas.

The Black Studies minor is an interdivisional minor based on an exploration of the American and global experience of Black people and of race as an historical category and construct. The minor requires a minimum of 24 semester credit hours. At least two courses in the minor must be at the 300 level or higher and students must have at least a 2.0 GPA in the minor. The minor requires: BLKST 100 *Introduction to Black Studies*; a course in Black literature; a course in African American history; a course in African/Diaspora history; and two approved electives.

Because this minor is interdivisional, students may complete any major to satisfy the college requirement that the major and minor be in different divisions.

Course offerings vary from year to year and thus consultation with the minor coordinator at the time of declaration is strongly suggested. When appropriate, other courses – for example, Special Topics courses in relevant subjects – may be substituted for approved electives. All substitutions of alternatives for approved courses must be approved by a minor coordinator, and students must discuss any potential course substitutions prior to enrolling in the course.

The Black Studies program strongly encourages study away from campus within the United States and abroad. Credit-bearing study away programs may count for credit towards the minor at the discretion of the coordinators.

Black Studies Learning Outcomes

Students who successfully complete a minor in Black Studies should be able to accomplish the indicated action in each of the following areas:

1. *Theory and Content*: Recognize the foundations of Black Studies as an interdisciplinary scholarly inquiry and the diverse theoretical perspectives that characterize this academic field of study;
2. *Critical and Creative Thinking*: Demonstrate critical and creative thinking skills that highlight the interplay between civic learning, human experience, social behavior and institutions, and/or intersectional approaches that shape the field of Black Studies;
3. *Research Methods*: Employ/deploy various pathways for collecting, examining, interpreting, and synthesizing information that lead to distinctive research methods informed by the study of African American experiences;
4. *Socio-cultural and Intersectional Awareness*: Recognize how race intersects with other social or cultural identities confronting peoples of the African Diaspora, including issues of ethnicity, gender, sexuality, religion, age, class, and nationality and;
5. *Communication in Communities*: Develop communication skills--writing, speaking, and listening--that will enable students to collaborate in the classroom and learn from broader local, national, and global communities.

The Black Studies Minor

The Black Studies minor requires 24 credits (minimum):

1. Black Studies core course: take BLKST 100 *Introduction to Black Studies*
2. Black literature course. Take **one** of the following:
 - ENGL 204 *Studies in African American Literature*
 - ENGL 321 *Literatures of Diversity in North America*
 - ENGL 322 *Advanced Studies in African American Literature*
3. African-American history course. Take **one** of the following:
 - BLKST 255/HIST 255 *African American History to 1865*
 - BLKST 257/HIST 257 *African American History Since 1865*

- HIST 269 *The Sixties in America*
- HIST 571 *The Civil Rights Movement*
- 4. African/Diaspora history course. Take **one** of the following:
 - HIST 119 *West African Civilizations*
 - HIST 173 *History of South Africa*
 - HIST 359 *Apartheid in South Africa and Beyond*
 - HIST 361 *Race and Identity in the Atlantic World*
 - HIST 563 *The Atlantic World*
- 5. Electives. Take **two** additional courses to bring the total credits to at least 24. Students may take no more than one additional course from the categories listed above as an elective. Additional approved electives for the minor are:
 - ECON 238 *Poverty, Inequality, and Efficiency*
 - ECON 256 *Economic Development*
 - ENVSC 352 *Environmental Justice*
 - FRNCH 330 *"The Empire Writes Back"*
 - PHIL 210 *Oppression and Liberation*
 - PHIL 310 *Global Justice*
 - POLSC 245 *The Politics of Third World Development*
 - POLSC 303 *Constitutional Law: Civil Rights and Liberties*
 - POLSC 326 *Sports and the Politics of Race and Nation*
 - POLSC 329 *Islam, Migration & Race in Western Europe*
 - POLSC 482 *Race and the American Political Mind*
 - PSYCH 451 *Psychology of the African American Experience*
 - PSYCH 452 *Psychology of Prejudice*
 - RELST 146 *Islam in America*
- 6. Advanced course requirement. At least two courses taken to fulfill the minor requirements listed above must be at the 300 level or above.

Black Studies Courses

BLKST 100 *Introduction to Black Studies*

An overview of the field of Black Studies as the academic outgrowth of the Civil Rights and Black Power movements of the sixties and seventies. Students engage the interdisciplinarity of Black Studies by exploring the intersections among music, visual arts, theater, cinema, literature, history, religion, and politics in black culture and experience in the U.S. Controversies in the field, as well as the continuing impact of racism on black communities and strategic debates within anti-racist movements, are examined. Students experience the ways in which Black Studies provides a unique tool to enrich their understanding of race and racism in the world in which they live. Required for the Black Studies minor. Distribution Requirements: HE, PD.

BLKST 225 *Black Popular Culture*

An examination of African American experience(s) through the lens of mainstream popular culture. We investigate sociological, historical, and theoretical perspectives for critiquing and examining topics related to African American popular culture(s), including film, music (Rock & Roll, Rhythm & Blues, and Hip Hop), television, comedy, and minstrelsy. Students learn the ways that pop culture constructs cultural identities and stereotypes in relation to the unique contributions made by Black Americans. Students engage in community-based research where they question the value of Black Popular Culture at the college and in the city of Meadville. Distribution Requirements: CL, PD.

BLKST 240 *Minority Health Disparities*

A study of the differences among racial and ethnic minority populations in the United States at the local and national levels with an emphasis on the diseases and illnesses in which racial and ethnic minorities have the highest morbidity and mortality burden. Emphasis is placed on the unique and complex dynamics of the individual and community practices that contribute to the higher burden of disease and includes an examination of community-based approaches to reduce the burden. Distribution Requirements: PD.

BLKST 255 *African-American History to 1865* (also listed as HIST 255)

A survey of the history of African-Americans from the earliest appearance of Africans in colonial North America to the end of the Civil War. Students explore slavery, slave society and economy, slave culture, African Americans and politics, and the abolition of slavery. Distribution Requirements*: HE,PD.

**This course counts as Social Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

BLKST 257 *African-American History since 1865* (also listed as HIST 257)

A survey of African-American history from the end of the Civil War to the present. Students explore topics such as Reconstruction, the rise and fall of Jim Crow, the Great Migration, the Harlem Renaissance, the Civil Rights Movement, Black Power, and Hip Hop. The lives of major figures in America's racial history are also examined. Distribution Requirements*: HE, PD.

**This course counts as Social Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

BLKST 529 *Internship: Black Studies*

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

Chemistry

Professors Persichini (Chair), Ams, Betush, Brosius-Jircitano, Chapp, Deckert, Garcia, Guldán, Murphree, Serra, Sheffield, Statman, Van Horn

Science is an integral part of a liberal arts education, and chemistry is a central science. The Chemistry Department offers its students not merely a collection of facts concerning the nature of chemical interactions, but endeavors to develop in them an appreciation for the experimental vision and rigor necessary to assemble such knowledge, and it expects of them a critical understanding of the logic and theory that integrates these bits of information into a unified whole. In doing so, we attempt to provide the opportunity for intellectual and personal growth. We encourage our students to appreciate science as a human endeavor and invite them to participate in the work of science as they accumulate the necessary insights and laboratory skills. We seek to stimulate and develop within each individual those qualities that foster an enthusiasm for knowledge, an attitude of critical reasoning, and the attainment of lucid self-expression, all of which transcend the limited context of chemical science.

Chemistry Learning Outcomes

Chemistry Major Learning Outcomes

Students who successfully complete a major in Chemistry are expected to be able to:

- Demonstrate a broad but thorough knowledge of the fundamental concepts of stoichiometry, atomic theory, structure and reactivity of elements and compounds, physical properties of matter, kinetics, equilibrium, and thermodynamics;
- Demonstrate extensive knowledge in at least one more of the subdisciplines of chemistry : analytical chemistry, biochemistry, chemistry education, inorganic chemistry, organic chemistry, and physical chemistry;
- Develop questions that can be answered through chemical experimentation, design and conduct safe and appropriate experiments to answer such questions, interpret the results of these experiments, and effectively communicate these results in both oral and written forms;
- Critically analyze chemical data, hypotheses, results, theories, and explanations by applying both chemical knowledge and intuition.

Chemistry Minor Learning Outcomes

Students who successfully complete a minor in chemistry are expected to be able to:

- Demonstrate a broad knowledge of the many of the fundamental concepts of stoichiometry, atomic theory, structure and reactivity of elements and compounds, physical properties of matter, kinetics, equilibrium, and thermodynamics;
- Conduct safe and appropriate experiments to answer chemical questions, interpret the results of these experiments, and effectively communicate these results in both oral and written forms;
- Critically analyze chemical data, hypotheses, results, theories, and explanations by applying both chemical knowledge and intuition.

Learning Outcomes for Chemistry Courses

All students who successfully complete a course in the Chemistry Department are expected to be able to:

- Demonstrate a knowledge of the fundamental concepts of stoichiometry, atomic theory, structure and reactivity of elements and compounds, physical properties of matter, kinetics, equilibrium, and thermodynamics relevant to specific contexts and applications;
- Effectively communicate this knowledge in both oral and written forms;
- Critically analyze chemical data, hypotheses, results, theories, or explanations by this chemical knowledge.

The Chemistry Major

At graduation, Chemistry majors must have a GPA of at least 2.0 in departmental courses and in required courses outside the department. The calculation is based on the grades of all required courses for completion of the major. Only the most recent grade is considered for courses that have been repeated. Chemistry courses exceeding the minimum requirements

Chemistry

of the major may be taken on a Credit/No Credit basis. The department recommends that the number of Credit/No Credit courses be kept to a minimum.

Chemistry courses numbered below 110 may not be counted toward the major.

For students wishing to receive an ACS-certified BS degree in Chemistry, all the requirements of the major must be satisfied, with the following provisos:

- The Physics 110/120 sequence (or equivalent AP credit) is required;
- The Chemistry 120/122 sequence (or equivalent AP credit) is required;
- Four credits of 400-level Chemistry are required (no substitutions allowed); and
- A minimum Chemistry GPA of 3.0 must be achieved.

Students wishing to receive ACS certification should send a brief letter of request, along with a WebAdvisor transcript, to the Chemistry Department Chair by 15 February in their senior year.

The major in Chemistry requires:

1. **Foundation courses.** Any foundation courses which a student tests out of will be waived as requirements for the major. The Foundation courses should be completed by the end of sophomore year. Take:
 - MATH 160 *Calculus I* (or equivalent)
 - MATH 170 *Calculus II* (or equivalent)
 - CHEM 120 *Chemical Concepts 1* (or CHEM 110 *Principles of Chemistry 1*)
 - CHEM 122 *Chemical Concepts 2* (or CHEM 112 *Principles of Chemistry 2*)
 - PHYS 110 *Core Concepts in Physics I*
 - PHYS 120 *Core Concepts in Physics II*
2. **Core courses.** Students should complete these courses by the end of the junior year. Consequently, some of these courses must be taken in the sophomore year. Take:
 - CHEM 222 *Inorganic Chemistry*
 - CHEM 231 *Organic Chemistry I: Form and Function*
 - CHEM 242 *Physical Chemistry*
 - CHEM 253 *Introductory Biochemistry*
 - FSCHE 201 *Research Methods in Chemistry*
3. **Intermediate courses.** Students should complete these courses by the end of the junior year. Take:
 1. CHEM 332 *Organic Chemistry II: Synthetic Strategies*
 2. CHEM 345 *Quantum Chemistry*
 3. CHEM 361 *Instrumental Analysis*
 4. CHEM 386 *Multistep Synthesis*
4. **One advanced chemistry course** (two credits) numbered in the 400's.
5. The Junior Seminar (CHEM 584)
6. At least four semester credit hours of Senior Project in Chemistry.

The Chemistry Minor

The minor in Chemistry requires at least 20 semester hours in Chemistry and eight in Mathematics. A maximum of four semester hours may be presented on a Credit/No Credit basis for the minor. Chemistry courses numbered below CHEM 110 may not be counted toward the minor.

The Chemistry minor requires:

1. MATH 160 *Calculus I* (or equivalent)
2. MATH 170 *Calculus II* (or equivalent)
3. CHEM 120 *Chemical Concepts 1* (or CHEM 110 *Principles of Chemistry 1*)
4. CHEM 122 *Chemical Concepts 2* (or CHEM 112 *Principles of Chemistry 2*)
5. FSCHE 201 *Research Methods in Chemistry*
6. **Two** of the following courses:
 - CHEM 222 *Inorganic Chemistry*
 - CHEM 231 *Organic Chemistry I: Form and Function*

- CHEM 242 *Physical Chemistry*
 - CHEM 253 *Introductory Biochemistry*
 - CHEM 332 *Organic Chemistry II: Synthetic Strategies*
 - CHEM 345 *Quantum Chemistry*
7. One advanced chemistry course (two credits) numbered in the 400's

Cooperative Engineering Program

Students who participate in a cooperative engineering program (3-2 engineering) with a major in Chemistry are required to take the Foundation courses, the Core courses, and the Junior Seminar, plus additional chemistry courses to bring the total to 33 semester hours in Chemistry.

Chemistry Courses

CHEM 104 *Forensic Chemistry*

An introduction to chemical principles as they apply to forensic investigations. Topics covered include the scientific method, measurements, chemical foundations (atoms, elements, compounds, and states of matter), reactions, energy, and kinetics as they pertain to forensics science. Through an understanding of basic chemical principles, this course investigates the role of chemistry in solving crimes. Crime-scene case studies are utilized to explore the scientific foundation for the examination of physical, chemical, and biological evidence. May not be taken for credit after successful completion of CHEM 110, CHEM 120, CHEM 112 or CHEM 122. One laboratory per week. This course must be taken on a letter grade basis. Distribution Requirements: SP.

CHEM 105 *The Science of Chemistry*

A study of the basic principles of chemistry and its contributions to the understanding of nature, modern technology, and the benefits and problems of science. One laboratory per week. Not open to science majors. May not be taken for credit after successful completion of CHEM 110, CHEM 120, CHEM 112 or CHEM 122. This course must be taken on a letter grade basis. Distribution Requirements: SP.

CHEM 108 *Environmental Chemistry*

A study of the origins, effects, and fate of chemical pollutants. Acid rain, global warming, the "ozone hole," and other problems of the air and water environments are discussed. Underlying questions concerning the chemistry of the environment are identified. Accounts of pollution in the popular press are critically evaluated from a scientific standpoint. One laboratory per week. Offered in alternate years. May not be taken for credit after successful completion of CHEM 110, CHEM 120, CHEM 112 or CHEM 122. This course must be taken on a letter grade basis. Distribution Requirements: SP.

CHEM 109 *The Science (and Art) of Brewing*

A study of the chemical processes involved in the brewing of beer. Students explore how we get from malted barley, hops, yeast, and water to beer. Topics include the microbiology of yeast, the biochemistry of fermentation, the chemistry of alpha and beta acids, and the physics of bubbles. Brewing beer, done outside of class, is an integral part of our study. CHEM 110 is recommended but not required. Restricted to Juniors and Seniors. Must be taken for a letter grade. *Prerequisite: All students enrolled must be at least 21 years of age.* Credit: Two semester hours. Distribution Requirements: QR, SP.

CHEM 110 *Principles of Chemistry 1*

An integrated lab/lecture experience that introduces the fundamental principles underlying the science of chemistry. Topics include reaction and interaction, molecular shape and structure, energy, and atomic structure. Includes one two-hour laboratory session per week. Students wishing to major in Chemistry after taking this course should consult the department about which course to take next. Students may not receive credit for both CHEM 110 and CHEM 120. Taught in the spring semester. *Pre- or corequisite: MATH 158 or MATH 160.* Distribution Requirements: QR, SP.

CHEM 112 *Principles of Chemistry 2*

Further exploration of the topics introduced in CHEM 110. Topics emphasized are thermodynamics, equilibrium and kinetics. Includes one two-hour laboratory session per week. Students wishing to major in Chemistry after taking this course should consult the department about which course to take next. Students may not receive credit for both CHEM 112 and

CHEM 122. Taught in the fall semester. *Prerequisite: Completion of CHEM 110 or CHEM 120 with a grade of "C" or better.* Distribution Requirements: QR, SP.

CHEM 120 Chemical Concepts 1

An introduction to atomic and molecular structure and reactivity. Topics include quantum theory, bonding theories, molecular interaction and reaction. An emphasis is placed on the use of mathematical reasoning to solve problems and obtaining a quantitative understanding of chemical systems. One three-hour laboratory period per week. Taught in the fall semester. Students may not receive credit for both CHEM 110 and Chemistry CHEM 120. *Corequisite: MATH 160 or above.* Distribution Requirements: QR, SP.

CHEM 122 Chemical Concepts 2

An introduction to chemical equilibrium and reactivity. Topics include thermodynamics, solution equilibrium and kinetics. An emphasis is placed on the use of mathematical reasoning to solve problems and obtaining a quantitative understanding of chemical systems. One three-hour laboratory period per week. Taught in the spring semester. Students may not receive credit for both CHEM 112 and CHEM 122. *Prerequisite: A grade of "C" or better in CHEM 120.* Distribution Requirements: QR, SP.

CHEM 222 Inorganic Chemistry

An examination of the structure, bonding, and reactivity of inorganic compounds with examples drawn from main group and transition-metal chemistry. Topics include molecular symmetry and group theory with focus placed on their application to vibrational and electronic spectroscopy; molecular orbital theory; reaction mechanisms of coordination complexes; and organometallic chemistry. One laboratory per week. *Prerequisite: CHEM 231.* Distribution Requirements: QR, SP.

CHEM 231 Organic Chemistry I: Form and Function

An examination of the structure and reactivity of small organic molecules. Discussion of molecular architecture includes bonding, geometry and conformation. These considerations are applied to a survey of organic reactions, mechanisms and energetic. Emphasis is placed on the development of problem-solving skills and the concise communication of chemical ideas. One laboratory per week. *Prerequisite: Completion of CHEM 122 or CHEM 112 with a grade of "C" or better.* Distribution Requirements: QR, SP.

CHEM 234 Organic Chemistry Laboratory II

Designed to relate directly to the material in CHEM 332. Problems in qualitative analysis, multistep synthesis, and natural product isolation that expand on the techniques learned in Chemistry 231 lab are presented. Emphasis is placed on the student's ability to work skillfully and independently in the laboratory, and to present well-structured conclusions in the form of written laboratory reports. *Corequisite: CHEM 332.* Credit: One semester hour. Distribution Requirements: QR, SP.

CHEM 242 Physical Chemistry

An introduction to classical thermodynamics and kinetics. Examples from biology, physics, environmental science and chemistry are used to illustrate the principles. Spring semester offering emphasizes biological examples. MATH 210 or PHYS 272 are strongly recommended as pre-or corequisites. *Prerequisites: MATH 170, PHYS 110, and CHEM 122 or CHEM 112.* Distribution Requirements: QR, SP.

CHEM 253 Introductory Biochemistry

An elucidation of the structure and function of biological macromolecules such as proteins, nucleic acids, carbohydrates, and lipids. The chemistry of various biological processes is studied and an attempt is made to provide a molecular explanation for biological phenomena. The laboratory introduces modern techniques in experimental biochemistry. One laboratory per week. *Prerequisite: Completion of CHEM 231 with a grade of "C" or better.* Distribution Requirements: QR, SP.

CHEM 332 Organic Chemistry II: Synthetic Strategies

A continued examination of the structure and reactivity of small organic molecules, with an emphasis on synthetic methodology. The mechanistic background developed in CHEM 231 is expanded to include aromatic compounds, and this comprehensive knowledge is applied to the study of methods for the construction of diverse synthetic targets. Also continued from CHEM 231 is the discussion of molecular structure, which is examined from the standpoint of spectroscopic

analysis. Emphasis is placed on the development of problem-solving skills and the concise communication of chemical ideas. *Prerequisite: Completion of CHEM 231 with a grade of "C" or better.* Distribution Requirements: QR, SP.

CHEM 345 Quantum Chemistry

An introduction to the description of chemical systems on the molecular level. The macroscopic behavior of chemical systems is interpreted using the theoretical, microscopic description provided by quantum mechanics. Students are encouraged to complete PHYS 272 before taking this course. *Prerequisite: CHEM 242.* Distribution Requirements: QR, SP.

CHEM 355 Biochemical Metabolism

A survey of the major metabolic pathways. Carbohydrate, lipid, electron transport and amino acid metabolic pathways will be explored at the molecular level. The molecular mechanisms of enzyme action and metabolic integration will be emphasized. *Prerequisite: CHEM 253.* Credit: Two semester hours. Distribution Requirements: QR, SP.

CHEM 357 Macromolecular Synthesis

A chemical and structural examination of how cells synthesize macromolecules. The biochemical mechanisms for the synthesis of nucleic acids and proteins are examined at the molecular and chemical level. *Prerequisite: CHEM 253.* Credit: Two semester hours. Distribution Requirements: QR, SP.

CHEM 361 Instrumental Analysis

An introduction to the use of instruments in chemical analysis. Students gain practical experience with modern spectroscopic and chromatographic techniques including GC-MS, HPLC-MS, NMR, stopped-flow techniques, and Raman spectroscopy. Hands-on experience is enhanced by a theoretical discussion of each technique studied. Two semester credit hours. *Pre- or corequisite: FSCHE 201.* Distribution Requirements: QR, SP.

CHEM 386 Multistep Synthesis

A practical introduction to advanced synthetic laboratory skills. Multistep procedures are used to construct small organic targets and biomolecules. Reliance on the literature to plan and execute independent investigations is required. Modern instrumentation is utilized for product analysis. *Co- or prerequisite: CHEM 332.* Credit: Two semester hours. Distribution Requirements: QR, SP.

CHEM 422–CHEM 429 Current Topics in Inorganic Chemistry

An examination of methods, theories and practices in the discipline of inorganic chemistry. Group discussion is based on readings from journal articles and monographs. Students contribute to the class through literature research, discussion and brief presentations. *Prerequisite: CHEM 222 or permission of the instructor.* Credit: Two semester hours. Distribution Requirements: SP.

CHEM 432–CHEM 439 Current Topics in Organic Chemistry

An examination of methods, theories and practices in the discipline of organic chemistry. Group discussion is based on readings from journal articles and monographs. Students contribute to the class through literature research, discussion and brief presentations. *Prerequisite: CHEM 332 or permission of the instructor.* Credit: Two semester hours. Distribution Requirements: SP.

CHEM 442–CHEM 449 Current Topics in Physical Chemistry

An examination of methods, theories and practices in the discipline of physical chemistry. Group discussion is based on readings from journal articles and monographs. Students contribute to the class through literature research, discussion and brief presentations. *Prerequisite: CHEM 242 or permission of the instructor.* Credit: Two semester hours. Distribution Requirements: QR, SP.

CHEM 452–CHEM 459 Current Topics in Biochemistry

An examination of methods, theories and practices in the discipline of biochemistry. Group discussion is based on readings from journal articles and monographs. Students contribute to the class through literature research, discussion and brief presentations. *Prerequisite: CHEM 253.* Credit: Two semester hours. Distribution Requirements: SP.

CHEM 462–CHEM 469 Current Topics in Analytical Chemistry

An examination of methods, theories and practices in the discipline of analytical chemistry. Group discussion is based on readings from journal articles and monographs. Students contribute to the class through literature research, discussion and brief presentations. *Prerequisite: FSCHE 201.* Credit: Two semester hours. Distribution Requirements: SP.

CHEM 529 Internship: Chemistry

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

CHEM 584 Junior Seminar

A practical introduction to laboratory techniques and research methods used in the senior project. Multi-week projects are undertaken to investigate chemical systems. Reliance on the literature to plan and execute independent investigations is required. Modern instrumentation is utilized for each project. An emphasis is placed on good written and oral communication skills. Taught in the spring semester. *Prerequisite: FSCHE 201.* Credit: Two semester hours.

CHEM 590 Independent Study

Study of special topics and/or laboratory research selected by the student who wishes to pursue independent work on material not covered in established courses. *Prerequisite: Permission of the instructor.* Credit: One to four semester hours.

CHEM 600–CHEM 620 Senior Project

A laboratory investigation of some topic of current research interest in collaboration with a faculty member. The topic, length of project, and amount of credit are chosen by the student in consultation with the faculty mentor. Careful laboratory technique, critical evaluation of data, depth of specialized knowledge, independence and originality are cultivated. A written and oral defense before a board of Chemistry faculty and regular attendance at the departmental seminar series are required during each semester of enrollment. The Senior Project may span only one semester, earning four semester hours credit, or may involve two separate semesters of work, totaling four, six or eight semester hours of credit. Greater credit requires a greater time commitment from the student. A grade will be awarded during the terminal semester of the project. Thus, there are six separate combinations of the following courses by which to complete the Senior Project.

CHEM 600

First semester enrollment, Credit/No Credit. Credit: Two semester hours.

CHEM 610

Second semester enrollment, graded. Credit: Two semester hours.

CHEM 601

First semester enrollment, Credit/No Credit. Credit: Four semester hours.

CHEM 611

Second semester enrollment, graded. Credit: Four semester hours.

CHEM 620

One-semester senior project, graded. Credit: Four semester hours.

Sophomore Seminar

FSCHE 201 Research Methods in Chemistry

An introduction to writing, speaking, and research methods in the discipline of chemistry. Topics include experimental design, statistical analysis of data, ethical conduct of research and selected classical, spectroscopic and chromatographic methods of analysis. Analytical techniques are discussed in the context of laboratory projects that are designed, performed, and interpreted by the class. Taught in the fall semester. *Prerequisite: a grade of C or better in CHEM 122 or CHEM 112.*

Chinese

Professor Shi

Allegheny College offers a minor in Chinese language along with instruction in Chinese (in the original language and in translation) through the department of Modern and Classical Languages. For Allegheny's Learning Outcomes for the study of modern languages, including Chinese, please see the "Modern and Classical Languages" section in this *Bulletin*.

See also the minor in "Chinese Studies."

Study Abroad

Students are encouraged to study in mainland China or Taiwan after completion of CHIN 120. The College sponsors several distinct study-abroad programs that are open to all qualified Allegheny students and to which Allegheny financial aid may be applied; see the "Study Away" section of this *Bulletin* for details. In particular, sponsored programs through CIEE in Beijing, Nanjing, and Shanghai (all in China) offer instruction in Chinese. Coursework taken abroad may be applicable to the Chinese minor, and students may receive credit for one level of language per semester spent abroad. Please consult with Professor Shi regarding placement and transfer credits.

The Chinese Minor

The Minor in Chinese Language and Culture requires 20 semester hours of coursework in the Chinese language and one culture course taught in English (CHIN 200, CHIN 355, or CHIN 385) for a total of 24 semester hours.

Chinese Courses

CHIN 110 Beginning Chinese I

An introduction to both the spoken and written Chinese language. Students learn basic Chinese characters, structural patterns, reading strategies, and basic elements of Chinese culture. Three class meetings; one oral practice period per week. Distribution Requirements: IP, ME.

CHIN 120 Beginning Chinese II

A continuation of the introduction to both the spoken and written Chinese language. Students learn additional Chinese characters and structural patterns. Students begin to practice reading for comprehension, develop basic writing skills, and receive an additional introduction to Chinese culture. Three class meetings; one oral practice period per week. *Prerequisite: CHIN 110 or permission of instructor.* Distribution Requirements: IP, ME.

CHIN 200 Chinese Civilization

A general survey of Chinese philosophy, history, literature, and the arts that provides a foundation for an understanding of Chinese culture and history. Students examine the history of China from its earliest origins up until the final days of its imperial past through original texts, artifacts, and visual representations. Topics include philosophy (including Confucianism and Legalism), religion (Daoism and Buddhism), literature (poetry and novels), and dynastic changes and historiography, as well as predominant cultural features that are identifiably "Chinese." Taught in English. Distribution Requirements: HE, IP.

CHIN 215 Intermediate Chinese

Continued acquisition and practice of both the spoken and written Chinese language. Students acquire additional Chinese characters and learn more complex structural patterns in order to improve reading and writing skills. Students begin to read selected authentic texts in Chinese to gain a better understanding of Chinese language and culture. Three class meetings; one oral practice period per week. *Prerequisite: CHIN 120 or permission of instructor.* Distribution Requirements: IP, ME.

CHIN 225 Chinese Readings, Film, and Composition

An examination of Chinese films and written texts. Students develop reading and writing skills as well as the cultural knowledge needed for successful study abroad. Three class meetings; one oral practice period per week. *Prerequisite: CHIN 215 or permission of instructor.* Distribution Requirements: HE, IP.

CHIN 305 Advanced Chinese Language and Culture I

An upper-level course for students who wish to develop and refine their ability to understand, speak, read, and write Modern Standard Chinese. Students examine extensive readings and video materials dealing with aspects of Chinese society and culture, economy, and politics. These texts serve as points of departure for discussion and composition. Recommended for students wishing to specialize in any field related to China. Three class meetings per week. *Prerequisite: CHIN 225 or permission of the instructor.* May be repeated for credit. Distribution Requirements: IP, ME.

CHIN 355 Modern Chinese Literature in Translation

A survey of influential literary works since the May Fourth movement of 1919. Students read fiction, poetry, and novels from different periods, investigate the political, cultural and/or aesthetic issues involved when the works were produced, gain an understanding of literary conventions of different genres, and learn to critically and creatively interpret individual texts. Taught in English. Credits: Four credits. Distribution Requirements: HE, IP.

CHIN 385 Contemporary Chinese Cinema

An introduction to a representative selection of Chinese-language cinema. Students explore the most talented filmmakers' works, examine Chinese cinematic language, and study these films not only as historiography and ethnography but also as representations of China mediated through cinematic discourses. One screening and three class meetings per week. Taught in English. Credits: Four credits. Distribution Requirements: HE, IP.

CHIN 529 Internship: Chinese Language

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

CHIN 592 Teaching in the Elementary or Secondary Schools

A field experience in education during which students work with teachers and students in elementary or secondary schools. Relevant readings, as well as discussions with the instructor and the supervising teacher, provide the background and context for the fieldwork. Students are required to keep a reflective journal and to complete a culminating project based on their experiences in the classroom. Offered on the Credit/No Credit basis only. Credit: Two to four semester credit hours. *Prerequisite: Permission of the instructor.*

Chinese Studies

Professors Wu (Program Coordinator), Olson, Shi, Wesosky

An interdivisional minor examining the language, culture, politics, and history of China. The minor includes coursework in Chinese language, Religious Studies, History, and Political Science. Through this minor, students will acquire an understanding of Chinese culture, history, economic development, and contemporary politics. A minimum of 24 credits are required for the minor. When appropriate, other courses – for example, Special Topics or FS 201 courses in relevant subjects – may be substituted for approved electives to bring the total credits to at least 24. All substitutions of alternatives for approved courses must be approved by the minor coordinator, and students must discuss any potential course substitutions prior to enrolling in the course. With the approval of the coordinator, appropriate EL Seminars to China may be substituted. Students who study abroad should take a minimum of 12 credits at Allegheny and should consult with the coordinator about the course selection in the foreign institution of higher education.

Because this minor is interdivisional, students may complete any major to satisfy the college requirement that the major and minor be in different divisions.

Chinese Studies Learning Outcomes

Students who successfully complete a minor in Chinese Studies will:

- Understand the evolution of the culture, history, military, thoughts, and institutions of China;
- Become aware of the Chinese historical experience and perspective in the modern global political-economic context;
- Grasp the most recent trends in contemporary Chinese development as well as major directions in the field of Chinese Studies;
- Develop critical thinking and writing skills and research tools through interdisciplinary approaches;
- Be exposed to a wide range of language clubs, study abroad programs, Chinese festivities, and international internship opportunities.

The Chinese Studies Minor

The minor in Chinese Studies requires:

1. Linguistic and Cultural Perspectives requirement: at least **12 credits** selected from among the following:
 - CHIN 110 *Beginning Chinese I*
 - CHIN 120 *Beginning Chinese II*
 - CHIN 200 *Chinese Civilization* (in English)
 - CHIN 215 *Intermediate Chinese*
 - CHIN 225 *Chinese Readings, Films, and Composition*
 - CHIN 305 *Advanced Chinese Language and Culture*
 - CHIN 355 *Modern Chinese Literature in Translation* (in English)
 - CHIN 385 *Contemporary Chinese Cinema* (in English)
 - RELST 160 *Buddhism*
 - RELST 170 *Religions of China*
2. Historical, Political, and Economics Perspectives requirement: at least **12 credits** selected from among the following:
 - HIST 165 *Pre-Modern China*
 - HIST 167 *Modern China, 1800-2000*
 - HIST 272 *Socialism and Post-Socialism in People's Republic of China*
 - HIST 353 *Women and Revolution in China*
 - HIST 355 *Modern Chinese Warfare*
 - HIST 573 *Mao's Cultural Revolution*
 - ECON 265 *The Economy of China*
 - POLSC 228 *Government and Politics of China*
 - POLSC 336 *Politics and Culture in the Asia-Pacific*

Chinese Studies

- POLSC 386 *Chinese Political Thought: From Confucius to the New Left*
 - POLSC 584 *State-Society Relations and the China Model*
3. Advanced coursework requirement: at least one course from each of the two categories above must be at the 300-level or above (two courses total).

Chinese Studies Courses

CHIST 529 *Internship: Chinese Studies*

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

Classical Studies

Professors Herrman (Program Coordinator), Carr, Farrelly-Jackson, Holland, Orttung.

Classical Studies is an interdivisional minor that provides a broad-based introduction to ancient Greek and Roman civilization which includes components of Latin language study, history and cultural studies. Students gain familiarity with diverse aspects of the ancient world and learn how to formulate original arguments based on primary sources, both material and literary. *See also the "Latin" minor.*

Classical Studies Learning Outcomes

Language Courses:

In Latin language courses, students learn to read literature in the original in one of the classical languages of the Greco-Roman world.

Content Survey Courses:

In content surveys, students acquire a broad base of knowledge of significant aspects (art, history, philosophy, religion) of the Greek and Roman world.

Advanced Course:

In an advanced course, students focus on a specific topic and consider a range of ancient sources and modern interpretations; they produce an essay that demonstrates both broad experience and particular expertise, utilizing modern research methods and resources in the field of classical studies.

The Classical Studies Minor

The minor requires 20 credits. Because this minor is interdivisional, students may complete any major to satisfy the college requirement that the major and minor be in different divisions.

Course requirements for the Classical Studies minor:

1. Latin language requirement (eight credits). Take at least eight credits of Latin language courses, which must be independent of any Latin courses used to satisfy any other requirements (i.e., no "double-counting" of Latin courses). Descriptions of Latin courses may be found in the "Latin" section of this *Bulletin*.
2. Classical history requirement (four credits). Take one of the following:
 - HIST 101 *The Greek World, 1184–323 BCE*
 - HIST 103 *The Roman World, 753 BCE–180 CE*
3. Advanced course requirement (four credits). Take one of the following:
 - HIST 551 *Orality and Literacy in Ancient Greece*
 - HIST 554 *Dreaming in Greece and Rome*
 - LATIN 315 *Advanced Latin*
4. Elective (four credits). Take one of the following elective courses to bring the total credits for the minor to at least 20:
 - ART 110 *Survey of Art History I*
 - ART 213 *Art of Ancient Greece and Rome*
 - HIST 101 *The Greek World, 1184–323 BCE*
 - HIST 103 *The Roman World, 753 BCE–180 CE*
 - LATIN 215 *Intermediate Latin*
 - LITRN 270 *Greek Mythology* (see the "Literature in Translation" section of the "Modern and Classical Languages" section of this *Bulletin*).
 - PHIL 260 *Ancient Greek Philosophy*
 - RELST 117 *Religion in the Ancient Greco-Roman World*

Classical Studies

Students who take both HIST 101 and HIST 103 may count one of them toward the elective requirement. Other appropriate courses may be included in the minor with the permission of the minor coordinator. Students are strongly encouraged to discuss any potential course substitutions prior to enrolling in the course.

Classical Studies Courses

CLSST 529 *Internship: Classical Studies*

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

Communication Arts and Theatre

Professors Mehler (Chair), Bailey, Branch, Cosdon, Crozier, Keeley, Silva, Sinha Roy, Tompkins, Watkins, Wiebel, Wilson, Yochim

Communication Arts and Theatre Mission Statement:

The Communication Arts and Theatre Department is dedicated to the creative and critical study of communication, with special emphasis on theatre, rhetoric, and media. The curriculum offers opportunities for the performance, practice, in-depth study, and analysis of texts and techniques in each of these spheres. Students engage in production, performance, and critical cultural studies, with the objective of becoming competent and engaged artists/scholars in their fields. The department's liberal arts emphasis encourages students to develop habits of engaged citizenship, thoughtful professionalism, and a meaningful private life.

Students should consult with department faculty to discuss career options and internship opportunities. Internships sponsored by the Communication Arts department require the joint approval of a faculty liaison person and the host agency.

Majors and minors in Communication and Theatre are encouraged to participate in student activities such as the ACTV television station, WARC-FM radio, the Playshop Theatre, Student Experimental Theatre, Orchesis dance troupe, *The Campus* newspaper, and the *Allegheny Literary Journal/Allegheny Review* publications.

Please note: Most 100-level classes and COMRT 285 must be taken prior to the student's senior year.

Communication Learning Outcomes

Communication Major Learning Outcomes

Students who successfully complete a major in Communication Arts are expected to:

- Situate works and ideas in historical, cultural, and political contexts: students should learn to connect concepts and texts (written, oral, visual, performative, live, and mediated) to the contexts in which they are embedded;
- Analyze critically multiple forms of human expression: students should be able to critique texts and performances by applying relevant theoretical lenses, comparing and contrasting works, conducting close textual analysis, and offering evaluative judgments;
- Create meaningful original work: students should learn, apply, explain, and critically reflect upon methodologies used in creating their own works, including theatrical performances, visual productions, speeches, and written essays;
- Participate productively in the public sphere: students should cultivate an awareness of their civic roles and responsibility to various communities. They should critically engage with media and popular culture; they should appreciate and patronize the theatre and performing arts; and they should practice engagement in a range of communication-related activities on campus, in Meadville, and in their future communities.

Communication Minor Learning Outcomes

Students who successfully complete a minor in Communication Arts are expected to:

- Learn analytical, critical and/or creative approaches to the arts of communication;
- Demonstrate competence in the field's basic skills of communication: writing, performing, or creating visual productions.

Communication Learning Outcomes for Other Students

Students who successfully complete a few courses in Communication Arts are expected to:

- Cultivate a critical awareness about communication practices they encounter in public and private life.

The Communication Major

The Communication major at Allegheny teaches students to engage critically and creatively with the wider culture that surrounds them. Working from rhetorical, media studies, and production traditions, students are asked to analyze, evaluate, and produce a myriad of communication texts across media and genre.

Majors are required to have a cumulative GPA of at least 2.0 in departmental courses at graduation. All Communication Arts courses taken at Allegheny on a letter grade basis are included in the GPA calculation with the exception of repeated courses, for which only the most recent grade counts. Declared majors must take departmental courses on a letter grade basis. A maximum of eight transfer credits may be counted towards the major. Please note: most courses at the 100 level and some at the 200 level must be taken before a student's senior year.

Requirements: (minimum 45 credits)

Introductory (take BOTH of the following):

- COMRT 120 *Introduction to Critical Media Studies*
- COMRT 145 *Foundations of Rhetoric and Public Communication*

Method (take one of the following):

- COMRT 202 *Modes of Film and Video Production*
- COMRT 220 *Media Criticism – Critical Approaches*
- COMRT 240 *Textual Analysis*

Practice (take one of the following):

- COMRT 150 *Acting I: Fundamentals*
- COMRT 170 *Oral Interpretation*
- COMRT 235 *Advanced Public Speaking*
- COMRT 276 *Media, Theory, and Practice*
- COMRT 285 *Visual Production I*

Communication and Civic Engagement (take one of the following):

- COMRT 256 *Power, Politics, and Communication*
- COMRT 261 *Media Institutions*
- COMRT 277 *Video Activism: History, Theory, Politics, and Practice*
- COMRT 279 *Community-Based Media: Creative Citizenry Through the Use of Video*
- COMRT 360 *Rhetoric and Civic Engagement*

Communication and Identity (take one of the following):

- COMRT 251 *Gender in Public Communication*
- COMRT 331 *Bodies and Health in Public Communication*
- COMRT 351 *Media and Identity*
- COMRT 376 *Media Consumption*

Advanced Topics (take one of the following):

- COMRT 303 *Acting and Directing for the Camera*
- COMRT 305 *Advanced Studio Production*
- COMRT 336 *The Visual in Public Communication*
- COMRT 340 *Digital and Screen Cultures*
- COMRT 375 *Documentary Tradition*
- COMRT 460 *Media and Cultural Politics*

Advanced Theory/Practice (take one of the following):

- COMRT 300 *Visual Production II*
- COMRT 465 *Media and Cultural Theory*
- COMRT 471 *Theories of Identity and Representation*

Students planning a senior project in video/film production should take COMRT 300. Students planning a critical/textual senior project should take COMRT 465 or COMRT 471.

Junior Seminar (take one of the following):

- COMRT 581 *Communication Junior Seminar*
- COMRT 583 *Production Junior Seminar*

Students planning a critical/textual senior project should take COMRT 581 (Communication). Students planning a senior project in video/film production should take COMRT 583 (Production).

Comprehensive Seminar (take concurrently with the Junior Seminar):

- COMRT 600 *Comprehensive Seminar*

Senior Project

- COMRT 610 *Communication Senior Project*

Electives

Take at least one additional COMRT course (4 credits) or FSCOM 201.

The Communication Minor

A minor in Communication Arts consists of 24 semester credits including one introductory course (either COMRT 120 or COMRT 145) and five other COMRT courses from among those listed for the Communication major. Two courses should be at the 200 level (can include FSCOM 201), and an additional two courses must be at the 300 level or higher. An approved 2-4 credit internship (COMRT 500) may count towards the minor, but does not count for the 300-400 level requirement. All courses taken for the minor within the department must be taken on a letter grade basis. A maximum of four transfer credits may be counted towards the minor.

Theatre Learning Outcomes

Theatre Major Learning Outcomes

On the completion of their course of study, Theatre Majors should be able to:

- Situate ideas, plays and production in historical, cultural and political contexts as this applies directly to the theatre;
- Understand theatrical conventions and language including genre and styles;
- Create meaningful analytical works such as research papers and dramaturgical projects and performance and production works;
- Employ these tools in a practice of engaged citizenry.

Theatre Minor Learning Outcomes

At the completion of their course of study, Theatre Arts minors should be able to:

- Appreciate theatre arts through analytical, critical, creative and practical approaches to plays, productions and dramatic art;
- Demonstrate competence in the basic skills of creating theatre.

The Theatre Major

Requirements: (minimum 45 credits)

Introductory (take BOTH of the following):

- COMRT 130 *Introduction to Theatre*
- COMRT 225 *Text and Performance*

Performance (take one of the following):

- COMRT 150 *Acting I: Fundamentals*
- COMRT 170 *Oral Interpretation*

Production

- COMRT 180 *Introduction to Theatre Production*
- Take one of the following:
 - COMRT 211 *Scenic Production Technology*
 - COMRT 212 *Lighting and Sound Technology*
 - COMRT 312 *Costume Technology and Make-up*

Practicum (take TWO of the following):

- COMRT 151 *Practicum: Performance*

- COMRT 181 *Practicum: Production*
- COMRT 281 *Practicum: Management*

Practicum courses are one semester credit hour each and must be taken on the Credit/No Credit basis. They may not be repeated for credit.

Theatre History (take BOTH of the following):

- COMRT 315 *Theatre History I: Classical Ages of the Theatre*
- COMRT 325 *Theatre History II: The Revolutionary Stage*

Junior Seminar

- COMRT 582 *Theatre Junior Seminar*

Comprehensive Seminar

- COMRT 600 *Comprehensive Seminar*

Senior Project

- COMRT 611 *Theatre Senior Project*

Electives

- 8-16 semester hours of electives

The Theatre Minor

Requirements:

Introductory (take BOTH of the following):

- COMRT 130 *Introduction to Theatre*
- COMRT 225 *Text and Performance*

Performance/Production (take one of the following):

- COMRT 150 *Acting I: Fundamentals*
- COMRT 180 *Introduction to Theatre Production*
- COMRT 200 *Fundamentals of Play Direction*

Advanced (take one of the following):

- COMRT 230 *Production Design I*
- COMRT 270 *Acting II: Voice and Movement*
- COMRT 280 *Stage and Production Management*
- COMRT 315 *Theatre History I: Classical Ages of the Theatre*
- COMRT 325 *Theatre History II: The Revolutionary Stage*
- COMRT 380 *Acting III: Styles of Acting*
- COMRT 425 *Advanced Play Direction*
- COMRT 430 *Advanced Topics in Theatre*

Theatre History (take one of the following not already chosen from the above):

- COMRT 315 *Theatre History I: Classical Ages of the Theatre*
- COMRT 325 *Theatre History II: The Revolutionary Stage*

Junior Seminar

- COMRT 582 *Junior Seminar in Theatre*

Communication Arts Courses

COMRT 120 *Introduction to Critical Media Studies*

An introduction to the field of critical media studies. We examine the role of traditional and new media in everyday life and politics, preparing students to be literate in the ways in which media participate in the shaping of identity and society. Students discuss media institutions, media policy and regulation, media history, media consumption, and media texts using critical media theory and the work of key thinkers in the field. Distribution Requirements: PD, SB.

COMRT 130 Introduction to Theatre

The study of theatre as an interpretative discipline. A lecture and discussion course concerned with artistic problem solving in the production of live theatre and the influences of aesthetic theory, dramatic criticism, and the work of collaborative artists on the theatre as a cultural institution. Viewing of live theatre and group projects required. Distribution Requirements: HE, ME.

COMRT 145 Foundations of Rhetoric and Public Communication

An introduction to the theory and history of public persuasion as an art central to civic life in a democratic society. Working with both ancient and contemporary texts, students explore the beginnings of communication as a field of study and the power of acts of communication to influence others, enable inquiry, shape identity, form community, and promote collective interests. Distribution Requirements: CL, HE.

COMRT 150 Acting I: Fundamentals

Exercises in the actor's basic skills, including scene analysis, sensory work, and improvisation as applied to realistic drama. Classroom performance of memorized scenes is required. May not be taken Credit/ No Credit. Distribution Requirements: HE, ME.

COMRT 151 Theatre Practicum: Performance

Further exploration of the topics examined in COMRT 150. Students engage problems in scene analysis, sensory work, vocal production, and stage movement. Emphasis is placed on the student's ability to work within a production team and to document and analyze the production process. *Prerequisites: COMRT 150 and permission of the instructor.* One semester credit hour. Credit/No Credit only.

COMRT 170 Oral Interpretation

Development of the voice as a communication tool through the study of projection, articulation, and expression of mood and character. Analysis of written material for oral presentation. Classroom performance before an audience is required. Distribution Requirements: HE, ME.

COMRT 180 Introduction to Theatre Production

A lecture and laboratory course dealing with the problems of physical setting as an integral part of theatre communication. Standard production theory and practice in scenery, lighting and sound.

COMRT 181 Theatre Practicum: Production

Further exploration of the topics examined in COMRT 180. Students engage problems in production communication, procedure, and systems operations. Emphasis is placed on the student's ability to work within a production team and to document and analyze the production process. One semester credit hour. Credit/No Credit only. *Prerequisites: Communications Arts 180 and permission of the instructor.*

COMRT 200 Fundamentals of Play Direction

Literary analysis of the play from the director's point of view. A lecture and laboratory course dealing with the problems of translation from script to stage in terms of composition, picturization, movement, pantomime, rhythm and tempo. Emphasis on the realistic proscenium theatre. *Prerequisite: COMRT 150 or permission of instructor.* Distribution Requirements: HE, ME.

COMRT 202 Modes of Film and Video Production

An introduction to the critical study of the modes of film and video production. Students examine the distinctive formal elements of each mode as well as the historical, cultural, and economic context of production and reception. The modes we explore include, but are not limited to classical Hollywood narrative, experimental, non-fiction, animation and new media. Distribution Requirements: HE.

COMRT 211 Topics in Scenic Production

Lecture and laboratory that explore the realization of scenic designs for the live performance. Topics may include automation, scene painting, stage properties, structural design, or theatrical rigging. *Prerequisite: COMRT 180 or permission of the instructor.* Two semester credit hours. Distribution Requirements: ME.

COMRT 212 Topics in Lighting and Sound Production

Lecture and laboratory that explore the realization of lighting and sound designs for the live performance. Topics may include electrical theory, transduction, photometrics, control technologies, production documentation, automated fixtures, signal manipulation, or live sound reinforcement. *Prerequisite: COMRT 180 or permission of the instructor.* Two semester credit hours. Distribution Requirements: ME.

COMRT 213 Topics in Costume Production

Lecture and laboratory that explore the realization of costume designs for the live performance. Topics may include garment construction, fabric manipulation, flat-pattern drafting, draping, stage makeup, or mask construction. *Prerequisite: COMRT 180 or permission of the instructor.* Two semester credit hours. Distribution Requirements: ME.

COMRT 215 Voice and Movement for the Actor

An exploration of the physical nature of actor training. Emphasis is on vocal and speech production for the stage and engagement with a range of approaches to the physical work that actors need to know and incorporate into their practice. *Prerequisite: COMRT 150 or permission of the instructor.* Two semester credit hours. Distribution Requirements: ME.

COMRT 220 Media Criticism—Critical Approaches

A writing-intensive exploration of the practices and methods of media analysis. Students learn to examine media as a product of industry, culture, history, policies and regulations, and consumption practices. Assignments, which encourage students to carefully examine the texts and contexts of contemporary media culture, draw on four major approaches to analysis: textual, historical, institutional, and audience-based. Distribution Requirements: HE, PD.

COMRT 225 Text and Performance

An introduction to dramatic and theatrical analysis. In this course, models of critical theories (historical, textual, political) will be used to further the student's understanding of dramatic literature across several periods. Emphasis will be on written analysis, discussion, and dramaturgical research. *Prerequisite: COMRT 130 or permission of instructor.* Distribution Requirements: HE, ME.

COMRT 230 Production Design I

An exploration of the communicative role design plays within the performing arts. Students learn basic design building blocks and communication theory as they apply to theatre and design. Emphasis is placed on developing the student's ability to communicate visual ideas coordinated within a performance framework. Distribution Requirements: HE, ME.

COMRT 235 Advanced Public Speaking

A practical exploration of the skills and theories of effective public presentation. Students perform a number of formal and informal speeches and engage with readings on the nature of context, audience, persuasion, and persona. Our studies foster a commitment to civic engagement by focusing on the skills of public dialogue essential to processes of citizenship, community and social change. Distribution Requirements: CL, ME.

COMRT 240 Textual Analysis

A writing-intensive introduction to the practices of textual analysis and close reading grounded in a rhetorical perspective. Students study the process of criticism and survey critical approaches that help them examine the texts and contexts of contemporary public culture. They read and write essays that assess the efficacy of cultural artifacts (such as television programs, advertisements, speeches, images, public spaces, events) in relation to community problems. We emphasize exploring the political significance of communication in public culture, especially how these cultural artifacts persuade us to adopt certain attitudes, shape our identities, and affect the relations of power in our society. Distribution Requirements: HE, PD.

COMRT 251 Gender in Public Communication

An inquiry into the interactive relationship between gender and public communication in American society. Students study ways in which practices of public communication define, reinforce, and challenge traditional norms of femininity and masculinity. Emphasis is placed on cultural expectations for performing gender, the communication of such expectations through public culture, and historical shifts in gender roles. Distribution Requirements: HE, PD.

COMRT 256 Power, Politics, and Communication

An inquiry into the relationship between communication and politics. Emphasis is placed on the potential of language and strategic discourses to create, perpetuate, and alter patterns of political and cultural behavior. Students consider the influence of contemporary political discourse on our understandings of public policy, political and cultural institutions, social controversies, and everyday life. Distribution Requirements: CL, SB.

COMRT 261 Media Institutions

An introduction to media institutions, surveying the history of media industries and media policy. Students explore the development of media technologies and content in relation to historical transformations in cultures of media production as well as contemporary debates about media regulation. We consider the economic structure of the media industries and focus on the practical ways in which institutions and industries shape media culture. Distribution Requirements: CL, SB.

COMRT 270 Acting II: Scene Study

An intermediate acting course that builds on the work done in Acting I to develop a student's abilities to analyze and perform dramatic text. Students study and analyze key playwrights in the realistic genre. Classroom performance of memorized scenes is required. May not be taken Credit/No Credit. *Prerequisite: COMRT 150, or permission of the instructor.* Distribution Requirements: HE, ME.

COMRT 276 Media, Theory, and Practice

A project-oriented application of critical media theory. Working within a specific topic of study (such as brand culture, global media, media and social change, children and the media), students have the opportunity to translate theory into media artifacts. Students learn to create and critically evaluate advertising and publicity campaigns, public service and social marketing initiatives, new media content, and/or media literacy projects. Distribution Requirements: CL, HE.

COMRT 277 Video Activism: History, Theory, Politics and Practice

An examination of the history of video activism. Through readings, screenings, discussions and the production of videos, students examine the blurring lines between art, documentary, journalism and activism. Topics include, but are not limited, to the infusion of identity politics (shifts created through feminist, queer and race theory), youth action in the 1990s, the act of recording as defense, movement from viriti to personal documentary, and issues of distribution. *Prerequisite: permission of the instructor.* Distribution Requirements: ME, PD.

COMRT 279 Community-Based Media: Creative Citizenry Through the Use of Video

An exploration of the history, theory, and practice of community-based media practices. In conjunction with identified community organizations, students develop a strategic plan for the construction of a film or video, learn about the practices of distribution, and actively engage a target audience. The creation of the film or video is seen as a critical, though not isolated, component in the process of productively advancing community goals. Students ground their work in historical and theoretical understandings of community-based media practices. *Prerequisite: permission of the instructor.* Distribution Requirements: CL, ME.

COMRT 280 Stage and Production Management

A survey of management practices specific to theatrical production. Students investigate organizational structures and procedures for the performing arts, personnel coordination, production communication and documentation, standard labor agreements, contracts, and other legal issues pertaining to theatrical production. *Prerequisite: COMRT 180 or permission of the instructor.*

COMRT 281 Theatre Practicum: Management

Further exploration of the topics examined in COMRT 280. Students engage problems in management structure, personnel coordination, and production procedures and communication. Emphasis is placed on the student's ability to work within a production team and to document and analyze the production process. *Prerequisites: COMRT 280 and permission of the instructor.* One semester credit hour. Credit/No Credit only.

COMRT 285 Visual Production I

A study of aesthetic concepts and production techniques involved in cinematic and television production. Students produce works demonstrating an understanding of the various production elements and how they can be combined for effective communication. Distribution Requirements: HE, ME.

COMRT 300 Visual Production II

An intermediate-level production course that develops a student's abilities to communicate in narrative, nonfiction and experimental forms of cinema. Students study key elements of scriptwriting and concept design and expand their technical skill base in lighting, sound design, cinematography and editing. Technical skills are developed in service to artistic, narrative and conceptual forms of expression. *Prerequisite: COMRT 202 and COMRT 285, or permission of instructor.* Distribution Requirements: HE, ME.

COMRT 303 Acting and Directing for the Camera

Instruction and practice in the basics of directing and acting for both television and film. Students work on skills in script and character development, camera placement, lighting, blocking, directing, and performance. Students produce projects to demonstrate their ability to understand and utilize the principles of film production. *Prerequisite: COMRT 150 or COMRT 285, or permission of the instructor.* Distribution Requirements: HE, ME.

COMRT 305 Advanced Studio Production

A continuation and further examination of the studio television experience begun in Visual Production I. Students increase their understanding of the technical aspects of television production, create and interpret scripts in terms of communication objectives, and produce programs that effectively combine production elements. We also explore the history of television programming and delivery from the 1940s to the present. *Prerequisite: COMRT 285 or permission of instructor.* Distribution Requirements: HE, ME.

COMRT 315 Theatre History I: Classical Ages of the Theatre

Close study of several major periods in Western theatre history, commencing with the origins of drama and concluding with the closing of the English playhouses in 1642. The course focuses on individuals, events, and dramatic forms that have contributed to the development of the theatre as a complex institution. In a larger sense, lectures and class discussions examine how these developments are shaped by the political, social, and intellectual forces of their time. *Prerequisite: COMRT 130 or permission of instructor.* Distribution Requirements: HE, IP.

COMRT 325 Theatre History II: The Revolutionary Stage

A survey of significant, revolutionary periods in the development of Western theatre through the seventeenth, eighteenth and nineteenth centuries. The craft, theory, technique, and dramaturgy of major movements including French neoclassicism, the English Restoration, romanticism, melodrama, and realism form the basis of study. *Prerequisite: COMRT 130 or permission of instructor.* Distribution Requirements: HE, IP.

COMRT 330 Production Design II

A lecture and studio course designed to provide the student with a beginning portfolio of work and a functional knowledge of advanced design theory. Emphasis is placed on the student's ability to communicate through drafting, sketches and representational models. *Prerequisites: COMRT 180 and COMRT 230, or permission of the instructor.* Distribution Requirements: HE, ME.

COMRT 331 Bodies and Health in Public Communication

An exploration of representations of the body and human health in American public communication. Students engage with a wide range of theoretical readings that carefully analyze how questions of the body and health are defined and operate within public culture. The influence of gender, race, power, media, and context on the form and force of such representations is particularly emphasized. *Prerequisite: COMRT 220 or COMRT 240, or permission of the instructor.* Distribution Requirements: PD, SB.

COMRT 336 The Visual in Public Communication

An advanced examination of visual imagery in public communication, with emphasis on how visual images can serve as sites of struggle over cultural norms. Students read works from a range of disciplines, such as cultural studies, media studies, art

history, and rhetoric, and investigate a range of visual media, such as photography, film, TV, the internet, digital media, and public space. Assignments encourage students to consider the relationship between the visual and the verbal, the effect of practices of looking, and the relationship between visual imagery and reality, including the role of visual imagery in constituting social identities and power relationships. *Prerequisite: COMRT 220 or COMRT 240, or permission of the instructor.* Distribution Requirements: HE, SB.

COMRT 340 Digital and Screen Cultures

Advanced discussion of mediated cultures. Students will investigate a specific medium, technology, or genre in media history, gaining historical, institutional, and textual expertise in a particular mediated culture. Topics may include new media technologies, media convergence, digital media cultures, reality television, television and new media, social media, Hollywood film, international cinema, brand culture, and broadcast history. *Prerequisite: COMRT 220 or COMRT 240, or permission of the instructor.* Distribution Requirements: HE, SB.

COMRT 351 Media and Identity

Advanced reading in theories of media and identity. Students explore the ways in which media texts, industries, and practices work to both construct and challenge our notions of identity. Readings may focus on issues of nationalism, globalism, race, class, gender, sexuality, ritual, or other elements of media identities. *Prerequisite: COMRT 220 or COMRT 240, or permission of the instructor.* Distribution Requirements: HE, PD.

COMRT 360 Rhetoric and Civic Engagement

An inquiry into the nature and role of rhetoric and public communication in a civil society. Democracy is based on an engaged citizenry advocating their positions and constructing reasoned, persuasive arguments. Students explore themes of civic engagement and social change in order to better understand the importance of rhetoric to America's contemporary democratic society. *Prerequisite: COMRT 120 or COMRT 145, or permission of the instructor.* Distribution Requirements: CL, HE.

COMRT 375 Documentary Tradition

An exploration of the development and impact of the documentary genre in film and television. Students are exposed to films that probe a social, economic, or political issue. The written analysis and discussion of the films screened emphasizes process, style, and historical perspective. Students produce their own documentary in video as their major project for the course. Distribution Requirements: CL, HE.

COMRT 376 Media Consumption

An examination of the role of media in everyday life, discussing specific practices of media consumption and interrogating how these practices intersect with broader questions of power and identity. Students discuss the relationship between media and consumer culture, audiences' reactions to and uses of media technologies and content, and subcultures of media fans, while developing their knowledge of methods for investigating media audiences and media consumption. Possible topics include ethnography, interviewing methods, critical reception studies, subcultural studies, media rituals, media and consumer culture, and media and citizenship. *Prerequisite: COMRT 120 or COMRT 145, or permission of the instructor.* Distribution Requirements: CL, HE.

COMRT 380 Acting III: Styles in Performance

Continued study of an actor's skills, including style in period or nonrealistic plays. Acting for the camera may also be covered. Classroom performance of memorized scenes required. May not be taken Credit/No Credit. *Prerequisite: COMRT 150.* Distribution Requirements: HE, ME.

COMRT 425 Advanced Play Direction

A lecture and laboratory course dealing with the auditory, visual, and kinetic analysis of the script. Theories of perception and communication are also dealt with. Emphasis on the problems of directing in the non-realism, non-proscenium theatre. *Prerequisite: COMRT 200.* Distribution Requirements: HE, ME.

COMRT 430 Advanced Topics in Theatre

Advanced level examination of developments in theatre performance. Topics may include: performance studies, nineteenth-century American theatre, musical theatre, community-based theatre, Asian theatre. Offered every other year. *Prerequisites: COMRT 130 and COMRT 225.*

COMRT 460 Media and Cultural Politics

Advanced reading in contemporary debates about the cultural politics of media representations and institutions. Topics may include media and globalization, post/anti-colonialism and media culture, media and citizenship, sexuality and the media, feminist media theory, or race/ethnicity and media culture. *Prerequisite: a Communication Arts course at the 200 level, or permission of the instructor.* Distribution Requirements: CL, PD.

COMRT 465 Media and Cultural Theory

A thorough immersion in critical media and cultural theory. Students engage both classical and contemporary theories of media and cultural meaning-making. Readings are advanced and challenging, exposing students to sophisticated primary and secondary sources and encouraging them to develop more informed, complicated, and critical relationships to contemporary media cultures. *Prerequisite: COMRT 220, or permission of the instructor.* Distribution Requirements: HE, PD.

COMRT 471 Theories of Identity and Representation

An advanced study of key theories in communication and cultural studies on the questions of identity and representation in the contemporary world, with an emphasis on interpreting primary sources. Students engage with original theoretical texts that define the nature of identity and subjectivity, consider the role of representation in the creation of our reality, and analyze the power of public communication to change and shape our worlds and ourselves. *Prerequisite: COMRT 220 or COMRT 240, or permission of the instructor.* Distribution Requirements: HE, PD.

COMRT 500 Internships

Credit: Two or four semester hours. Internships sponsored by the Communications Arts department require the joint approval of a faculty liaison person and the host agency. Information on internship positions is also available from the Allegheny Gateway.

Internships with Public and Commercial Television/Radio Stations

Liaison: Professor Keeley

Students may choose to work in one or more of the following areas of public and commercial television: production; publicity and public relations; fund raising and development in public television accounting and business management; continuity writing; and broadcast writing. Past interns have worked with WQLN, Erie; WSEE-TV, Erie; WJET-TV, Erie; WICU-TV, Erie; KDKA-TV, Pittsburgh; WPXI, Pittsburgh; WQED, Pittsburgh; WEWS, Cleveland; and NBC headquarters, New York.

Internship in Graphic Arts, Public Relations, and Advertising

Liaison: Professor Keeley

The internship is designed as a practicum in the areas of graphic arts, preparation of audio-visual materials, copy writing, photography, promotion planning, radio commercial preparation, and educational program production. Interns follow a general orientation program, which will involve contact with commercial and service organization clients. The culminating point of the internship experience will be a client-oriented project for which the intern is the primary researcher and producer.

Internship in Cable Television System

Liaison: Professor Keeley

A practicum in the areas of cable television program production, management, community relations, and special problems in the cable system operation, subject to the approval of the host agency.

Internship in Arts Administration

Liaison: Professor Cosdon

The intern works in the administration of a professional arts organization in one or more of the following areas: fund raising and development; promotion, publicity, and public relations; touring and booking; financial administration; house management; rehearsal management; community relations and education outreach programs. Past interns have been with

Communication Arts

the Pittsburgh Alloy Dance Theatre; the Three Rivers Shakespeare Festival; Meadville Council on the Arts; The Pittsburgh Foundation; and the Trumbull (Ohio) Council on the Arts.

Internship in Theatre Arts

Liaison: Professor Cosdon

The student may choose to work in a theatre organization in one or more of these areas: acting; scene, sound, lighting design; house management; box office and publicity; costume design and management; stage management; financial administration; rehearsal and production responsibilities; properties; and scenery, sound, lighting, and costume construction.

COMRT 529 Internship: Communication Arts

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

COMRT 581 Communication Junior Seminar

COMRT 582 Theatre Junior Seminar

COMRT 583 Production Junior Seminar

An intensive production class which explores visual and aural elements, which contribute to the art of narrative cinema. Early films, fictional and non-fictional, are used to study the origins of modern cinema. Each student makes short projects exploring filmic principles chosen from those presented in class. As a group, students produce a lengthier project and then arrange and promote a public screening. Students create a coherent visual style, understand the logistics of production, and gain an overview of the marketplace. *Prerequisites: COMRT 285 and COMRT 300.* Offered every other year.

COMRT 590 Independent Study

Available to qualified students seeking to do advanced work outside the scope of scheduled course offerings. A project proposal must be submitted and approved in the semester prior to the semester in which the student registers for the course. Credit: Two or four semester hours.

COMRT 600 Comprehensive Seminar

Preparation for the Senior Comprehensive Project. Students study research methods, conducting exploratory research, developing focused topics, and addressing issues of composition and revision. Much of the work for the seminar is conducted independently; the culminating assignment is a Comprehensive Project Proposal. Credit: one semester hour. Credit/No Credit only. *Co-requisite: COMRT 581, COMRT 582, or COMRT 583.*

COMRT 610 Communication Senior Project

Prerequisites: COMRT 581 or COMRT 583, and COMRT 600.

COMRT 611 Theatre Senior Project

Prerequisites: COMRT 582 and 600.

Sophomore Seminar

FSCOM 201 Communication in a Discipline

*Communication Arts**

An exploration of oral and written communication with a focus on communication within a specific academic field. Students investigate the conventions of communication in the discipline and the methods by which practitioners position their work within larger disciplinary contexts. *Prerequisite: FS 102.* The course must be taken on a letter grade basis.

**The topical material covered in this sophomore seminar varies from section to section and year to year. Some sections of this course may have additional prerequisites.*

Community and Justice Studies

Professors Martin and Roncolato (Program Coordinators), Moore

Community and Justice Studies (COMJ) investigates challenges facing communities, analyzes key methods of social action, develops ethical reasoning, and directly engages students in responsible engagement in our community. COMJ offers students an intellectual framework for understanding social systems, structures, movements and how these shape society, especially in relationship to power and oppression. The course of study has the following objectives: 1) to provide students with the tools to develop deep civic knowledge, sophisticated civic skills, and life-long civic values; 2) to support the development of thoughtful and ethical democratic engagement; 3) to embed students' experiences of engagement in a broader social, political, and economic context of place; 4) to equip students for complex thinking about social issues by providing them with theoretical and empirical tools for understanding communities and the dynamics of change within them; 5) to encourage students to examine and perhaps revise their beliefs about community life and its needs and assets, as well as responsibilities to one's community.

Note: students may not complete programs in both Community and Justice Studies and Values, Ethics, and Social Action.

Community and Justice Studies Learning Outcomes

Students who successfully complete a program in Community and Justice Studies are expected to achieve the following outcomes in each of the listed areas:

- **Civic Knowledge**
 1. Understand one's sources of identity and their influence on civic values, assumptions, and responsibilities to a wider public*;
 2. Understand how her/his experiences of engagement relate to broader social, political, and economic contexts of place;
 3. Understand systematic and group influences on social problems from theoretical and applied perspectives;
 4. Understand theories of organizational decision-making, democratic change, or dynamics of community change;
 5. Gain civic and intercultural knowledge.
- **Civic Skills**
 - a. Demonstrate skills of deliberation and bridge building across differences*;
 - b. Function effectively in cross-cultural environments to create change ;
 - c. Use frameworks of multiple academic disciplines for ethical analysis of societal issues and conducting community research.
- **Civic Values**
 1. Develop a concern for issues of justice and equality;
 2. Develop a commitment to increase efficacy in public life, whether through everyday citizenship, service, professional work, or activism;
 3. Demonstrate a determination to raise social and ethical issues and questions in and about public life;
 4. Develop a responsibility to a larger good*;
 5. Examine personal motivations and how they affect one's own active citizenship**;
 6. Demonstrate the ability to reason ethically about social issues and to connect them to philosophical models of value.
- **Collective Action**
 - Demonstrate effective engagement in local and global contexts;
 - Participate in a significant project that recognizes and responds to real community needs and desires in ways that move beyond the charity model;
 - Navigate political systems and processes, both formal and informal*.

* AAC&U, *Crucible Moment*, p. 4

** Taken from Learning Outcomes developed by Tufts University

The Community and Justice Studies Major

Because this program is interdivisional, students who major in Community Justice Studies may complete any minor to satisfy the college requirement that the major and minor be in different divisions. (Note, however, that Community and Justice Studies majors may not also minor in Values, Ethics, and Social Action).

The Community and Justice Studies major requires a minimum of 46 semester credit hours. No courses for the major may be taken on a Credit/No Credit basis except for internships that are required to be taken CR/NC. *Courses with prerequisites are marked with an asterisk (*)*.

I. Core courses. Take **all** of the following four courses (16 credits):

- COMJ 160 *Introduction to Community and Justice Studies* (4 credits)
- COMJ 260 *Interdisciplinary Methods for Social Research** (4 credits)
- COMJ 460 *Community Organizing and Civic Professionalism** (4 credits)
- COMJ 560 *Community and Justice Studies Junior Seminar** (4 credits)

II. Ethics. Take **one** of the following (4 credits):

- PHIL 140 *Ethics and Community*
- PHIL 210 *Oppression and Liberation*
- PHIL 285 *Business and Management Ethics*
- RELST 200 *Christian Ethics*

III. Place. Take **one** of the following (4 credits):

- ARTEN 301 *Envisioning Environmental Futures**
- COMRT 279 *Community-Based Media: Creative Citizenry Through the Use of Video*. Note: this course may not be used to satisfy both the Place requirement and the Civic Learning Cluster requirement.
- ENVSC 250 *Environmental Education*
- PSYCH 375 *Community Psychology**

IV. Political Participation and Democracy. Take **one** of the following (4 credits):

- COMRT 145 *Foundations of Rhetoric and Public Communication*
- HIST 253 *Citizenship, Democracy, and the French Revolution*
- HIST 326 *The American Revolutionary Era**
- JOURN 200 *Journalism and Democracy in the United States*
- POLSC 221 *Law, Courts, and Judicial Processes*
- POLSC 325 *Rights in Comparative Perspective*

V. Civic Learning Cluster. Take **three courses** (12 credits) within **one of the following themes**. At least one four-credit course in the cluster must be at the 300 or 400 level. Students who wish to define their own focus for the Civic Learning Cluster must meet with the coordinator of the Community and Justice Studies program.

A. Social Systems and Privilege

- BLKST 100 *Introduction to Black Studies*
- COMRT 460 *Media and Cultural Politics**
- HIST 337 *History of American Masculinity**
- SOCAN 200 *Introduction to Cultural Anthropology*
- WGSS 100 *Introduction to Women's, Gender, and Sexuality Studies*
- WGSS 207 *Human Sexual Identities*

B. Global Systems

- ECON 256 *Economic Development**
- GHS 130 *Introduction to Global Health*
- PHIL 310 *Global Justice**
- POLSC 120 *Comparative Government and Politics*
- POLSC 329 *Islam, Migration & Race in Western Europe*

C. Community Change and Activism

- COMRT 277 *Video Activism: History, Theory, Politics and Practice*
- COMRT 279 *Community-Based Media: Creative Citizenry Through the Use of Video*. Note: this course may not be used to satisfy both the Place requirement (III) and the Civic Learning Cluster requirement (V).

- COMRT 360 *Rhetoric and Civic Engagement**
- HIST 269 *The Sixties in America*
- HIST 332 *Problems in Contemporary America**

D. Public Policy

- COMRT 261 *Media Institutions*
- ECON 238 *Poverty, Inequality, and Efficiency**
- ENVSC 380 *Climate and Energy Policy**
- POLSC 213 *Health Policy in the U.S.*
- POLSC 214 *Rural Politics*

VI. Service Leadership. Students must hold a Service Leader position for one year (e.g. Bonner, Davies, Allegheny Volunteer Service Leader) and concurrently take COMJ 520 *Connecting Action and Reflection I* during the first semester of the leadership position and COMJ 521 *Connecting Action and Reflection II* during the second (1 credit each).

VII. Senior Project. Take COMJ 620 *Senior Project in Community and Justice Studies*.

The Community and Justice Studies Minor

Because this program is interdivisional, students who minor in Community Justice Studies may complete any major to satisfy the college requirement that the major and minor be in different divisions. (Note, however, that Community and Justice Studies minors may not also minor in Values, Ethics, and Social Action).

The minor requires a minimum of 26 semester credit hours. No courses for the minor may be taken on a Credit/No Credit basis except for internships that are required to be taken CR/NC. *Courses with prerequisites are marked with an asterisk (*)*.

I. Core courses. Take three courses (12 credits):

- COMJ 160 *Introduction to Community and Justice Studies*
- COMJ 260 *Interdisciplinary Methods for Social Research**
- COMJ 560 *Community and Justice Studies Junior Seminar**

II. Ethics. Take **one** of the following (4 credits):

- PHIL 140 *Ethics and Community*
- PHIL 210 *Oppression and Liberation*
- PHIL 285 *Business and Management Ethics*
- RELST 200 *Christian Ethics*

III. Community and Justice. Take two courses (eight credits) across or within any of the elective focus area designations below (8 credits). At least one course (4 credits) must be in the Social Science division.

A. Place

- ARTEN 301 *Envisioning Environmental Futures**
- COMRT 279 *Community-Based Media: Creative Citizenry Through the Use of Video*
- ENVSC 250 *Environmental Education*
- PSYCH 375 *Community Psychology**

B. Political Participation and Democracy:

- COMRT 145 *Foundations of Rhetoric and Public Communication*
- HIST 253 *Citizenship, Democracy, and the French Revolution*
- HIST 326 *The American Revolutionary Era**
- JOURN 200 *Journalism and Democracy in the United States*
- POLSC 221 *Law, Courts, and Judicial Processes*
- POLSC 325 *Rights in Comparative Perspective*

C. Social Systems and Privilege

- BLKST 100 *Introduction to Black Studies*
- COMRT 460 *Media and Cultural Politics**
- HIST 337 *History of American Masculinity**
- SOCAN 200 *Introduction to Cultural Anthropology*
- WGSS 100 *Introduction to Women's, Gender, and Sexuality Studies*
- WGSS 207 *Human Sexual Identities*

D. Global Systems

- ECON 256 *Economic Development**
- GHS 130 *Introduction to Global Health*
- PHIL 310 *Global Justice**
- POLSC 120 *Comparative Government and Politics*
- POLSC 329 *Islam, Migration & Race in Western Europe*

E. Community Change and Activism

- COMRT 277 *Video Activism: History, Theory, Politics and Practice*
- COMRT 360 *Rhetoric and Civic Engagement**
- COMJ 460 *Community Organizing and Civic Professionalism**
- HIST 269 *The Sixties in America*
- HIST 332 *Problems in Contemporary America**

F. Public Policy

- COMRT 261 *Media Institutions*
- ECON 238 *Poverty, Inequality, and Efficiency**
- ENVSC 380 *Climate and Energy Policy**
- POLSC 213 *Health Policy in the U.S.*
- POLSC 214 *Rural Politics*

IV. Service Leadership. Students must hold a Service Leader position for one year (e.g. Bonner, Davies, Allegheny Volunteer Service Leader) and concurrently take COMJ 520 *Connecting Action and Reflection I* during the first semester of the leadership position and COMJ 521 *Connecting Action and Reflection II* during the second (1 credit each).

Community and Justice Studies Courses

COMJ 160 Introduction to Community and Justice Studies

An introduction to the theories and ethics of social action, with a focus on community service. Theories of social dynamics and ethical systems are explored as a way to understand how social action can be useful to a community as well as the problems that can arise in implementing social action plans. Students participate in a service-learning component, which they reflect upon in writing and discussion, so as to better understand how the theories apply and where they may fall short. Attention is also paid to the ways in which class, race and gender shape the processes and outcomes of social action. *Prerequisites: first-year, sophomore or junior standing.* Distribution Requirements: CL, PD.

COMJ 260 Interdisciplinary Methods for Social Research

A study of the methods and tools of social research processes. We discuss quantitative research methods useful for analysis of social phenomena and problems including descriptive and basic inferential statistics. We also examine qualitative research methods appropriate for social action and participatory research projects. *Prerequisite: COMJ 160.* Distribution Requirements: CL.

COMJ 460 Community Organizing and Civic Professionalism

A study of the history and practices of community organizing as a methodology of social change and civic engagement. Through a seminar format, we trace key moments in a select group of movements for change and, through those cases, identify skills, values, and methods that are central to community organizing as a social and community practice. Students develop skills that are grounded in theory and history and that can be deployed in concrete social situations. *Prerequisite: COMJ 160.* Distribution Requirements: CL.

COMJ 520 Connecting Action and Reflection I

Part one of a two-semester course sequence in service learning. This seminar combines community engagement with guided reflection, and participants must hold concurrently, or have recently completed, a co-curricular service leader position. Examples of approved leadership positions include: Bonner Leader, Bonner Scholar, Allegheny Volunteer Service Leader, Davies Community Service Leader, Farhner Fellowship, CEED internship, America Reads Site Supervisor, and Computer Tutor Site Supervisor. One semester credit hour.

COMJ 521 *Connecting Action and Reflection II*

Part two of a two-semester course sequence in service learning. This seminar combines community engagement with guided reflection, and participants must hold a co-curricular service leadership position while enrolled. Examples of approved leadership positions include: Bonner Leader, Bonner Scholar, Allegheny Volunteer Service Leader, Davies Community Service Leader, Farhner Fellowship, CEED internship, America Reads Site Supervisor, and Computer Tutor Site Supervisor. *Prerequisite: COMJ 520.* One semester credit hour.

COMJ 529 *Internship: Community and Justice Studies*

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

COMJ 560 *Community and Justice Studies Junior Seminar*

A preparation for students to engage in community research. Students develop skills in data analysis and are introduced to broader social analysis and effective community interaction. Students are exposed to the basic tenets of qualitative and quantitative research, with a particular emphasis on developing rigorous research projects, but are also trained to locate their research findings in larger social processes, with discussions including both productive ways of interacting with community members as well as the connection between strong research and social change. *Prerequisites: COMJ 160 and COMJ 260.*

COMJ 620 *Senior Project in Community and Justice Studies*

Completion, presentation, and defense of the Senior Project. Senior Projects in the Community and Justice Studies program should include a community engagement component developed in concert with the project advisor. *Prerequisite: COMJ 560.*

Computer Science

Professors Kapfhammer (Chair), Jumadinova, Roos, Wenskovitch

Computer Science is about computers and computation; the essence of the discipline is the study of algorithms—the design, development and characterization of algorithms, their realization as computer programs, the analysis of the correctness and efficiency of algorithms, and the limitations of the algorithmic method as an approach to problem solving. The department's offerings include an introduction to the discipline including programming, data structures, and discrete mathematics; core courses in theoretical computer science, computer languages, computer organization, algorithm analysis, and software systems design; advanced courses in compiler design, operating systems and distributed systems; and a variety of applications and electives. The human dimensions of computing—social, professional, and ethical implications—are treated throughout the department's courses. The Computer Science programs have an integral laboratory component—nearly all of the courses include a weekly formal laboratory session to provide for practice and experimentation utilizing the principles learned in the classroom and from the course texts. The laboratory component affords the opportunity for hands-on experience with several computing and network systems. The Department has laboratories adjacent to faculty offices and classrooms in Alden Hall including an advanced-technology computer science classroom that facilitates active learning; a software development laboratory designed for group work on large software systems; and a laboratory for advanced coursework and research.

The study of computer science leads to and requires the ability to analyze ideas, to think logically, and to communicate ideas clearly and concisely. In this way, study of computer science contributes to the foundation of an excellent liberal arts education.

Computer Science Learning Outcomes

Students who successfully complete either a major or a minor in the discipline of computer science are expected to demonstrate the successful attainment of the listed learning outcomes in each of the following categories:

- **Basic**
 - Understands the basic and practical foundations of computer science (e.g., algorithms, data types, conditional logic, recursion, procedural programming concepts, object-oriented programming principles);
 - Knows how to use standard development tools to implement software solutions to problems.
- **Core**
 - Can design, implement, evaluate, improve, and document an algorithmic solution to a problem;
 - Understands the mutually beneficial connections between (i) computer hardware and software and (ii) theoretical computer science and practical software development.
- **Applications**
 1. Understands the basics of application areas such as networking, data management, artificial intelligence, and computer graphics;
 2. Can apply key concepts from these application areas to formulate and solve problems and evaluate solutions implemented as computer programs.
- **Advanced**
 - Understands advanced concepts in areas such as compiler design, operating systems, and distributed systems;
 - Knows how to apply key ideas from these advanced subjects to formulate and solve problems and evaluate solutions implemented as complete, efficient, and effective computer systems.
- **Independent Research**
 - Demonstrates critical thinking abilities and effective written and oral communication skills;
 - Can identify, analyze, and use sources in the both the technical and research literature.
- **Professional Development**
 - Understands how to work in a team and evidences the willingness to commit to lifelong learning.

Programs

The major and minor field programs are designed to provide a solid academic basis in the principles of computer science combined with practical experience in software systems design, implementation, and analysis. Courses are divided into four categories: basic courses, core courses, advanced courses, and applications. There are two majors in computing, Computer Science and Applied Computing, and several interest-focused minors.

The Computer Science major is designed to prepare students for advanced study of computer science or any of a variety of positions in the computing industry or in other industries requiring computing expertise. The Applied Computing major is designed to prepare students for entry-level software development positions or entrepreneurial and management positions in computing and computing related areas.

The Computer Science Major

The major in Computer Science requires successful completion of at least 44 semester hours in Computer Science. To graduate with a major in Computer Science, a student must have an earned GPA of at least 2.0 in required Computer Science and other courses presented for the major. With the exception of CMPSC 111, no course presented for the major may be taken on the Credit/No Credit grade basis.

Requirements:

1. **Basic courses** (three courses):
 - CMPSC 111 *Introduction to Computer Science I*
 - CMPSC 112 *Introduction to Computer Science II*
 - MATH 205 *Foundations of Mathematics* (see “Mathematics” section in this *Bulletin*)
2. **Core courses** (four courses):
 - CMPSC 210 *Principles of Computer Organization*
 - CMPSC 220 *Programming Language Concepts*
 - CMPSC 230/MATH 310 *Theory of Computation and Formal Languages*
 - CMPSC 250 *Analysis of Algorithms*
3. **Advanced course:** at least **one** of the following:
 - CMPSC 420 *Introduction to Compiler Design*
 - CMPSC 440 *Operating Systems*
 - CMPSC 441 *Principles of Distributed Systems*
4. **Electives** (two courses). Computer Science electives may be chosen from courses listed in the core, applications and advanced categories in the course listings below. In some cases, Special Topics courses (CMPSC 490) or independent study courses (CMPSC 590) may be used to satisfy the elective requirement.
5. **Mathematics requirement** (two courses). Students pursuing the major in Computer Science must complete a mathematics unit consisting of two courses to be chosen from MATH 320, MATH 325, MATH 345, MATH 360, and MATH 365, or, with approval of the faculty of the Department of Computer Science, some special topics courses in mathematics (those numbered MATH 490 through MATH 499). Students who plan to pursue graduate studies in Computer Science are encouraged to also complete the calculus sequence through MATH 210.
6. **The Junior Seminar** (CMPSC 580)
7. **The Senior Project** (CMPSC 600 and CMPSC 610)

The Applied Computing Major

Students seeking to major in Applied Computing must select either the Software Development track or the Management and Entrepreneurship track.

The Software Development Track

The major in the Software Development track of the Applied Computing major requires successful completion of at least 44 semester hours in computer science, four semester hours in economics, and 12 semester hours in mathematics. To graduate with a major in Applied Computing: Software Development Track, a student must have an earned GPA of at least 2.0 in required Computer Science and other courses presented for the major. With the exception of CMPSC 111, no course presented for the major may be taken on the Credit/No Credit grade basis.

Requirements:

1. **Basic courses** (four courses):
 - CMPSC 111 *Introduction to Computer Science I*
 - CMPSC 112 *Introduction to Computer Science II*
 - MATH 205 *Foundations of Mathematics*
 - ECON 100 *Introduction to Microeconomics*
2. **Core courses** (four courses):
 - CMPSC 210 *Principles of Computer Organization*
 - CMPSC 220 *Programming Language Concepts*
 - CMPSC 250 *Analysis of Algorithms*
 - CMPSC 280 *Principles of Software Development*
3. **One advanced course:** CMPSC 440 *Operating Systems* or CMPSC 441 *Principles of Distributed Systems*.
4. **One of the following applications courses:**
 - CMPSC 370 *Artificial Intelligence*
 - CMPSC 380 *Principles of Database Systems*
 - CMPSC 381 *Data Communication and Networks*
5. **An internship sequence** consisting of:
 - CMPSC 500 *Internship Seminar*
 - An internship (CMPSC 510–CMPSC 512) approved by the department faculty
 - CMPSC 501 *Internship Seminar*

If, after completion of CMPSC 500, the student is unable to obtain an internship meeting the department's guidelines, the department may allow a substitute requirement. In any case, the student must complete CMPSC 500 and CMPSC 501.
6. **Mathematics requirement** (two courses). Students in the Software Development track must complete a two-course mathematics unit consisting of:
 - MATH 170 *Calculus II*
 - **One of the following:**
 - a. MATH 320 *Linear Algebra*
 - b. MATH 345 *Probability and Statistical Inference I*
 - c. MATH 360 *Graph Theory*
 - d. MATH 365 *Combinatorics and Discrete Models*
7. **The Junior Seminar** (CMPSC 580)
8. **The Senior Project** (CMPSC 600 and CMPSC 610).

The Management and Entrepreneurship Track

The major in the Management and Entrepreneurship track of the Applied Computing major requires successful completion of at least 32 semester hours in computer science, 20 semester hours in economics, four semester hours in mathematics, and eight semester hours of research project (junior seminar and senior project) in the student's choice of computer science or economics. To graduate with a major in Applied Computing: Management and Entrepreneurship Track, a student must have an earned GPA of at least 2.0 in required Computer Science and other courses presented for the major. With the exception of CMPSC 111, no course presented for the major may be taken on the Credit/No Credit grade basis.

Requirements:

1. **Basic courses** (four courses):
 - CMPSC 111 *Introduction to Computer Science I*
 - CMPSC 112 *Introduction to Computer Science II*
 - MATH 205 *Foundations of Mathematics*
 - ECON 100 *Introduction to Microeconomics*
2. **Core courses** (five courses):
 - CMPSC 210 *Principles of Computer Organization*
 - CMPSC 220 *Programming Language Concepts*
 - CMPSC 250 *Analysis of Algorithms*

- ECON 200 *Microeconomic Theory*
- ECON 240 *Introduction to Managerial Economics*
- 3. **One advanced course**, CMPSC 440 *Operating Systems*
- 4. **One applications course**: CMPSC 380 *Principles of Database Systems* or CMPSC 381 *Data Communications and Networks*
- 5. **Economics requirement** (two courses):
 - ECON 202 *Economic Statistics*
 - ECON 280 *Economics of Entrepreneurship I* or ECON 440 *Advanced Managerial Economics*
- 6. **An internship sequence** consisting of:
 - CMPSC 500 *Internship Seminar*
 - An internship (CMPSC 510–CMPSC 512) approved by the department faculty
 - CMPSC 501 *Internship Seminar*
- 7. **The Junior Seminar and Senior project**. Students complete one of the following capstone sequences:
 - Computer Science sequence:
 - a. CMPSC 580 *Junior Seminar: Topics and Research Methods in Computer Science*
 - b. CMPSC 600 *Senior Thesis I*
 - c. CMPSC 610 *Senior Thesis II*
 - Economics sequence:
 - a. An Economics Seminar (ECON 578–ECON 589)
 - b. ECON 620 *Senior Project*

The Computer Science Minor

The minor in Computer Science requires the completion of at least 20 semester hours of course work in Computer Science including:

- **One** of the following courses:
 - CMPSC 210 *Principles of Computer Organization*
 - CMPSC 220 *Programming Language Concepts*
 - CMPSC 230/MATH 310 *Theory of Computation and Formal Languages*
 - CMPSC 250 *Analysis of Algorithms*
 - CMPSC 280 *Principles of Software Development*
- An additional eight semester credit of hours of Computer Science courses numbered 200 or above.

With the exception of CMPSC 111, no course presented for the minor may be taken on the Credit/No Credit grade basis.

Suggested course sequences for various interests include:

Theory of Computing

CMPSC 111, CMPSC 12, CMPSC 210, CMPSC 230/MATH 310, and CMPSC 250

Computer Architecture

CMPSC 111, CMPSC 112, CMPSC 210, and two of CMPSC 220, CMPSC 250, CMPSC 420, CMPSC 440, or CMPSC 441

Computer Languages

CMPSC 111, CMPSC 112, CMPSC 210, CMPSC 220, CMPSC 230, and CMPSC 420

Computer Systems

CMPSC 111, CMPSC 112, CMPSC 210, CMPSC 220, and CMPSC 440 or CMPSC 441

Artificial Intelligence

CMPSC 111, CMPSC 112, CMPSC 210, CMPSC 220, and CMPSC 370

Computers, Databases, and Data Transmission

CMPSC 111, CMPSC 112, CMPSC 210, CMPSC 380, and CMPSC 381

Computers and Mathematics

CMPSC 111, CMPSC 112, CMPSC 230/MATH 310, and CMPSC 250

Computer Applications

CMPSC 111; CMPSC 112; one of CMPSC 210, CMPSC 220, CMPSC 230/MATH 310, CMPSC 250, or CMPSC 280; and two of the following: CMPSC 370, CMPSC 380, CMPSC 381, CMPSC 382, and CMPSC 383

Software Systems Design

CMPSC 111, CMPSC 112, CMPSC 210, CMPSC 220, and CMPSC 280

Computer Interface Design

CMPSC 111, CMPSC 112, CMPSC 210, CMPSC 280, and CMPSC 382

Computer Science Courses

NOTE: For students who matriculated before Fall 2016, all Computer Science courses with a laboratory count as a laboratory course in the Natural Sciences for the purpose of satisfying the College distribution requirement

Basic Courses

CMPSC 111 *Introduction to Computer Science I*

An introduction to the principles of computer science with an emphasis on creative expression through the medium of a programming language. Participating in hands-on activities that often require teamwork, students learn the computational structures needed to solve problems and produce artifacts such as interactive games and computer-mediated art and music. Students also learn how to organize and document a program's source code so that it effectively communicates with the intended users and maintainers. Additionally, the introduction includes an overview of the discipline of computer science and computational thinking. One laboratory per week. *Prerequisite: Knowledge of elementary algebra.* Distribution Requirements: ME, SP.

CMPSC 112 *Introduction to Computer Science II*

A continuation of CMPSC 111 with an emphasis on data structures, data abstraction, algorithm design, the analytical and experimental evaluation of algorithm performance, and object-oriented design and implementation techniques. Topics include stacks, queues, deques, lists, strings, trees and graphs, dictionaries, recursion, searching and sorting algorithms, and an introduction to program verification. One laboratory per week. *Prerequisite: CMPSC 111 or permission of the instructor.* Distribution Requirements: QR, SP.

Core Courses

CMPSC 210 *Principles of Computer Organization*

An introduction to the basic organization and operation of computers including logical structure, hardware components, machine and assembly language, and computer system performance. Topics include internal representation of information, instruction set architecture, instruction types and addressing techniques, computer arithmetic, memory systems, design and operation of the control unit, input/output devices and interfaces, assembly language and translation techniques, and modern architectural enhancements such as pipelining and multiprocessors. Special emphasis is on systems programming and assignments in a particular assembly language. One laboratory per week. *Prerequisite: CMPSC 112.* Distribution Requirements: QR, SP.

CMPSC 220 *Programming Language Concepts*

A study of the important concepts in the design of programming languages, with emphasis on data types, scoping, binding times, control structures, facilities for abstraction, parallel constructs, and storage allocation. Language constructs are evaluated both for their usefulness in supporting the software development process and the overhead incurred in implementing and using them. Both procedural and non-procedural languages are studied, and students acquire enough literacy in a few of these languages to write moderately sophisticated programs. One laboratory per week. *Prerequisite: CMPSC 210.* Distribution Requirements: QR, SP.

CMPSC 230 *Theory of Computation and Formal Languages (also listed as MATH 310)*

An introduction to the theories of finite-state machines, pushdown automata and Turing machines as well as the relation between automata and the formal languages they recognize. Students explore computational theory and its practical applications in lexical analysis and language parsing. *Prerequisites: MATH 205 with a grade of C or better and CMPSC 112, or permission of instructor.* Offered in alternate years. Distribution Requirements: QR, SP.

CMPSC 250 Analysis of Algorithms

A treatment of selected topics from the analysis of algorithms including models of computation, design of efficient algorithms, computational complexity, and NP-completeness. Students develop expertise in mathematical analysis and algorithmic programming methodology. One laboratory per week. *Prerequisites: CMPSC 112 and MATH 205.* Distribution Requirements: QR, SP.

CMPSC 280 Principles of Software Development

A human-centric study of the principles and concepts used in the team-based specification, design, implementation, testing, and maintenance of large software systems. Topics include requirements elicitation and analysis, formal specification, software architecture and design, software measurement, software testing and analysis, and program evolution. In addition to examining the human behaviors and social processes undergirding software development methodologies, students participate in teams tasked with creating a significant software application for a customer. One laboratory per week. *Prerequisites: CMPSC 210 and CMPSC 220, or permission of the instructor.* Offered in alternate years. Distribution Requirements: SB, SP.

Applications

CMPSC 300 Introduction to Bioinformatics (also listed as BIO 300)

An introduction to the development and application of computational approaches to answer biological questions. Students use state-of-the-art bioinformatics software to gain insights into the functionality of the information contained within genomes as well as learn the algorithms behind such applications. Topics include data management, analysis of large-scale biological datasets, genome annotation, and genetics of disease. Unique challenges in the field and the wide range of existing solutions are examined. One laboratory per week. *Prerequisites: BIO 221 and FSBIO 201, or CMPSC 111.* Distribution Requirements: QR, SP.

CMPSC 370 Artificial Intelligence

A survey of the theory, computational techniques, and applications of artificial intelligence. Topics include agents, knowledge representation, machine learning, general problem solving, natural language processing, neural networks, evolutionary computation, computer vision, robotics, and philosophical questions. One laboratory per week. *Prerequisite: CMPSC 112.* Offered in alternate years. Distribution Requirements: QR, SP.

CMPSC 380 Principles of Database Systems

A study of the design and implementation issues in database management systems. Topics include data models, logical/physical database design, data access/search techniques, normalization theory, mappings from logical to physical structures, storage, and utilization. Additional topics include database reorganization, migration, database integrity, consistency, privacy and security, distributed database systems, architecture of knowledge-based systems, and intelligent query interfaces. One laboratory per week. *Prerequisite: CMPSC 112.* Offered in alternate years. Distribution Requirements: QR, SP.

CMPSC 381 Data Communications and Networks

An introduction to the theory and techniques of data communications and network design and analysis. Topics include data communications concepts, layered network architectures, local and wide area networks, protocols, switching, routing, security, and areas of current interest. The protocols of the Internet and the World Wide Web are used throughout to illustrate networking concepts. Students complete a large programming project involving some aspect of networking. One laboratory per week. *Prerequisite: CMPSC 112.* Offered in alternate years. Distribution Requirements: QR, SP.

CMPSC 382 Visual Computing

An introduction to the fundamentals of computer graphics, visualization, and visual computing. Topics covered include concepts of light, color, two- and three-dimensional representations, data visualization, image processing, image rendering, and animation. These concepts are illustrated using medical imaging, simulation, human vision processing, computer art, and other applications. Laboratory assignments covering each major course topic provide a solid basis for advanced work in computer graphics and visualization. One laboratory per week. *Prerequisites: One course in programming and one course in mathematics, or permission of the instructor.* Distribution Requirements: ME, QR.

CMPSC 383 Multi-Agent and Robotic Systems

A study of autonomous software agent and robotic systems and the principles, design, and implementation underlying such systems. In addition to analyzing the unique challenges and existing solutions in this field, students examine how the topics studied impact local and global community problems. Students are also required to develop and evaluate several multi-agent or multi-robot systems for solving specific public problems and, furthermore, to reflect on civic issues surrounding the use of these systems. One laboratory per week. *Prerequisite: CMPSC 111.* Distribution Requirements: CL, QR.

Advanced Courses

CMPSC 420 Introduction to Compiler Design

An introduction to the basic concepts of compiler design and implementation from lexical, syntactic, and semantic analysis to target code generation. Topics are presented from an implementation point of view. The semester project includes construction of a compiler for a small language using lexing and compiler-compiler languages. One laboratory per week. *Prerequisite: CMPSC 220, or permission of instructor.* Offered in alternate years. Distribution Requirements: QR, SP.

CMPSC 440 Operating Systems

A study of operating systems and their design and implementation. Topics include the evolution of modern computer operating systems, basic components of an operating system, and hardware issues of importance to operating system design and implementation. Consideration is given to processes and threads, resource (processor, memory, device, and software) management, process and device scheduling, deadlocks, input/output, file systems, and system security. A representative operating system is examined in detail. One laboratory per week. *Prerequisite: CMPSC 210.* Offered in alternate years. Distribution Requirements: QR, SP.

CMPSC 441 Principles of Distributed Systems

An examination of the principles and paradigms associated with the design, implementation, and analysis of distributed systems. Topics include the characterization of distributed system models, remote communication, distributed scheduling, synchronization and mutual exclusion, naming and time, consistency and replication, and fault tolerance. Selected distributed system development environments are discussed in the context of the above topics. One laboratory per week. *Prerequisites: CMPSC 280 or CMPSC 440 or permission of the instructor.* Distribution Requirements: QR, SP.

Internships

CMPSC 500–CMPSC 501 Internship Seminar

A corequisite seminar for all students participating in the Internship Program. Internship students enroll twice, once prior to and once following the Internship. CMPSC 500 focuses on expectations and planning, leading to the Internship Proposal required for all students planning an internship. CMPSC 501 provides the opportunity for students who have completed the Internship to prepare written and oral reports on the Internship experience. The student, in consultation with the faculty of the Department of Computer Science, is responsible for arranging for an acceptable internship. The courses meet together weekly for one-half a semester. Credit: one semester hour for each course. *Prerequisites: Completion of at least two core courses.*

CMPSC 510 Internship: Software Development

An experiential learning opportunity with an employer in the area of software development. Students identify a potential employer as part of their work in the first internship seminar, CMPSC 500, work (usually during the summer) for this employer under the guidance of a mentor, write a report on their experiences, and share the insights gained from the internship with the Department in a public presentation. Students mentor future interns as part of the second internship seminar, CMPSC 501. *Prerequisite: CMPSC 500. Corequisite: CMPSC 501.* Credit: two semester hours.

CMPSC 511 Internship: Management

An experiential learning opportunity with an employer in the area of management of software projects. Students identify a potential employer as part of their work in the first internship seminar, CMPSC 500, work (usually during the summer) for this employer under the guidance of a mentor, write a report on their experiences, and share the insights gained from the internship with the Department in a public presentation. Students mentor future interns as part of the second internship seminar, CMPSC 501. *Prerequisite: CMPSC 500. Co-requisite: CMPSC 501.* Credit: two semester hours.

CMPSC 512 Internship: Computing

An experiential learning opportunity with an employer in some area of computer science other than software development or software management, e.g., database or network management. Students identify a potential employer as part of their work in the first internship seminar, CMPSC 500, work (usually during the summer) for this employer under the guidance of a mentor, write a report on their experiences, and share the insights gained from the internship with the Department in a public presentation. Students mentor future interns as part of the second internship seminar, CMPSC 501. *Prerequisite: CMPSC 500. Co-requisite: CMPSC 501. Credit: two semester hours.*

CMPSC 529 Internship: Computer Science

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

Other Courses

CMPSC 580 Junior Seminar: Topics and Research Methods in Computer Science

An advanced treatment of selected topics from various areas of computer science with an emphasis on appropriate research methods. Practical skills are acquired in technical writing, critical reading, and presentation of technical literature in preparation for the senior project. One laboratory per week. *Prerequisite: Completion of the computer science core or permission of the instructor.*

CMPSC 590 Independent Study

Individual research under the guidance of a member of the Department's faculty. A project proposal must be submitted to the Department and approved in the semester prior to the semester in which the student intends to register for the course.

CMPSC 600 Senior Thesis I

Independent research in computer science. *Prerequisite: CMPSC 580. Credit: one semester hour.*

CMPSC 610 Senior Thesis II

Continuation of independent research in computer science. *Prerequisite: CMPSC 600. Credit: three semester hours.*

Dance and Movement Studies

Professors Weisman (Director), Reedy, Sumerfield

Dance and Movement Studies provides an experiential program that explores the relationship of movement to self, culture, and environment. The program is multi-dimensional and offers students the opportunity to enhance technical skill and personal presence, to promote wellness and self-discovery, to investigate performance values, and to build community. It enriches applications to education through expanding how students think about the learning process, acknowledging that an individual's kinesthetic experience can be a tool for learning, providing possibilities for internship practice, and informing the knowledge base of prospective educators regarding how humans learn through movement. Practices are designed to develop ease of movement, flexibility, power, and expressiveness. In addition students are guided in expanding their awareness of and their experience with the diverse and dynamic language of movement. Dance and movement can be used as metaphors for finding personal meaning and appreciating individual, social, and environmental differences.

In the studio, the critical analysis practice involves asking questions, making observations, reflecting on possibilities, and articulating choices. The program draws on resources that include somatic experience, community interaction, scholarly writings, film and video, and contemporary critical reviews. By considering the implications of dance and movement as cultural signifiers, the program fosters activity that integrates the individual with society and the world. Flexibility in course study is permitted to meet a student's individual interests and needs. The Dance and Movement Studies program is part of the Humanities division.

Dance and Movement Studies Learning Outcomes

Learning Outcomes for the Dance and Movement Studies Minor:

Students who successfully complete a minor in Dance and Movement Studies will:

1. Apply basic anatomical relationships to the felt sense of the body, including the expressiveness inherent in movement. (Addressed in DMS 100 *Principles of Movement*.)
2. Explore the body-mind as a dynamic system subject to change through personal choice and environmental influences, including influences from assumptions inherent in language. (Addressed in DMS 200 *Landscapes of the Body*.)
3. Examine the role of dance and ritual in the lives of individuals and communities, including one's own. (Addressed in FSDMS 201 *Dance: Ritual of Experience*.)
4. Gain insights into dance as representative of cultural contexts and values. (Addressed in FSDMS 201 *Dance: Ritual of Experience* and DMS 470 *History of Contemporary Dance*.)
5. Develop skills in presenting, both in writing and in speaking, topics from the discipline of Dance and Movement Studies. (Addressed in FSDMS 201 *Dance: Ritual of Experience* and all upper level electives.)

Learning Outcomes for Dance and Movement Studies Practice Courses:

Students who successfully complete Dance and Movement practice courses will:

1. Gain proficiency in skills specific to the practice or dance style;
2. Be familiar with the history and cultural significance of the practice or dance style.

The Dance and Movement Studies Minor

The minor in Dance and Movement Studies requires a minimum of 26 semester credit hours and a GPA of at least 2.0 in courses for the minor. All courses for the minor in Dance and Movement Studies must be taken on the letter-grade basis.

The minor also requires participation in at least one presentation or performance sponsored by the Allegheny Dance and Movement Studies Program. Students are encouraged to seek advice from Dance and Movement Studies faculty in selecting practice courses that suit their interests and goals.

Requirements:

1. **Core courses** (twelve credits). Take:
 - DMS 100 *Principles of Movement* (two credits)
 - DMS 200 *Landscapes of the Body* (two credits)
 - DMS 370 *Creative Processes* (four credits)
 - FSDMS 201 *Dance: Ritual of Experience* (four credits)
2. **Elective** (four credits). Choose one of the following:
 - DMS 470 *History of Contemporary Dance*
 - DMS 580 *Movement and Meaning*
 - INTDS 312 *The Neuroscience of Dance and Movement*
3. **Practice courses** (ten credits).

Dance and Movement Studies Courses

DMS 100 *Principles of Movement*

The study and practice of basic principles of movement. Readings and guided practices provide an understanding of anatomical and kinesiological issues that surround balanced, fluid and efficient human movement. Credit: two semester hours. Distribution Requirements: HE, ME.

DMS 101 *Modern Dance: Body/Mind and Movement*

A basic approach to modern dance as an applied study of movement coordinations. Practical explorations focus on correct body alignment and efficient movement in relation to gravity, and directing energies in the body toward enhanced expressiveness. Elemental analysis of space, time, dynamics, form, sensation, image, and intention are introduced. Designed sequences and improvisations develop presence, balance, flexibility, strength, and endurance. Theoretical investigations include discussions of the interweaving of dance and culture. Credit: two semester hours. Distribution Requirements: HE, ME.

DMS 102 *Ballet for Modern Dancers*

An introduction to the technique of ballet through movement analysis theory and somatic principles. Emphasis is placed on aspects of human movement including spatial tensions, qualities of movement, and bodily efficiency in application to the practice of ballet. Style analysis includes an investigation into the historical influences as well as the cultural values and trends that led to the emergence of contemporary ballet in America. Credit: two semester hours. Distribution Requirements: HE, ME.

DMS 104 *Jazz Dance*

A study of fundamental dance movement that focuses on the broken line, undulating form, and syncopated rhythms of the American Jazz idiom. The utilization of and commitment to the safe and full use of the body is emphasized. Particular attention is paid to ways in which jazz dance mirrors the social history of the American people, reflecting ethnic influences, historical events, and cultural changes. Credit: two semester hours. Distribution Requirements: HE, ME.

DMS 105 *Tap Dance*

A study that combines the earthy African influence of hoofing and the light percussive footwork of clog dancing with the rhythmic syncopations of the jazz idiom. Emphasis is on physical balance, precision of touch, ankle articulations and an investigation of the origins and contemporary evolution of tap dance. Credit: two semester hours. Distribution Requirements: HE, ME.

DMS 106 *Cultural Dance*

The experiential learning and theoretical investigation of the origins and implications of basic cultural dance forms such as American Square Dance, Israeli Folk Dance, Clogging, Native American Dances, Belly Dancing, Greek Folk Dancing, Butoh and others. Comparison will be made between different cultural dance forms in terms of specific geographies, ceremonies, and other functions. Credit: two semester hours. Distribution Requirements: IP, ME.

DMS 107 Introduction to Ballroom Dance

The experiential learning of basic ballroom dance forms: waltz, foxtrot, swing, tango, cha-cha, rumba, and polka. In addition, these dance forms and their music are explored as mirrors of the culture in which they exist-reflecting past, present, and intercultural exchange. Lectures, film, discussion, and papers illustrating the forms and culture of ballroom dancing are required. Credit: two semester hours. Distribution Requirements: HE, ME.

DMS 110 Yoga I

A balanced investigation of the theory and practice of classic and contemporary Yoga principles. Focusing on the theme of personal wellness, emphasis is placed on practicing physical postures, exploring the breath, and developing an energetic of sound. These practices nourish the body, focus the mind, and sharpen the intellect. Experiences include individual and group work. Credit: two semester hours. Distribution Requirements: HE, IP.

DMS 111 Ta'i Chi Ch'uan

A physical and intellectual examination of Ta'i Chi Ch'uan. Ta'i Chi Ch'uan is a Chinese system of exercise, a form of moving meditation and a martial art. Students learn a basic form or series of postures. We examine the cultural, historical, religious and psychophysical underpinnings of this art through reading and discussion. Credit: two semester hours. Distribution Requirements: HE, IP.

DMS 112 Community Contra Dance

Students attend a weekly 2½ hour community dance on campus with live music. A series of particular dance steps are taught to focus on the development of body movement, coordination, and aerobic endurance. Two lecture/discussion sessions examine: 1) the historical development of this dance form (from 18th-century America to the present day) and 2) the music form that accompanies this type of dance. A mandatory field trip to a regional dance is required toward the end of the semester. Credit: one semester hour. Distribution Requirements: HE, ME.

DMS 114 Asian Martial Arts I

Physical training and intellectual exploration of a specific Asian martial art. Students learn basic physical techniques of the form. Explorations include the historical, cultural, and philosophical bases of the particular Asian martial art through reading and discussion. Each semester focuses on a specific form such as Tang Soo Doo (Korea), Kung Fu (China), Karate (Okinawa). Credit: two semester hours. The course requires a small additional fee and may be held a short distance off campus. Distribution Requirements: HE, IP.

DMS 120 Meditation: Theory and Practice

A study of meditation techniques with a focus on the theory and practice of mindfulness as it evolved in the classic traditions of Yoga and Buddhism. Alignment, posture, health, and mental focus are explored in the context of classical and contemporary writings. Credit: two semester hours. Distribution Requirements: HE, IP.

DMS 121 Meditation: Contemplative Explorations

A study of the structures that support meditation. Traditions of meditation in non-dual points of view are explored along with the practices of stillness, contemplative movement, chanting, japa, and mantra repetition. Readings and discussion articulate theories underlying contemplative experience. The practice focuses on individual meditation as well as meditation with partners and in groups. Credit: two semester hours. Distribution Requirements: HE, IP.

DMS 200 Landscapes of the Body

A mindful process-oriented exploration of experiential human physiology and anatomy. The study relates basic principles of human movement to dynamic body systems. The impact of movement on the body-mind as well as the converse is examined. Emphasis is placed on applications to somatic practices and includes a developmental movement perspective. Investigations include readings, drawing, research, writing, and improvisation. Credit: two semester hours. Distribution Requirements: HE.

DMS 201 Upper Level Technique—Modern

A continued exploration of the body-mind connection as expressed and experienced through modern dance. Refinement of movement skills and understanding of elemental analyses are developed through challenging movement sequences and improvisations. Emphasis is placed on the poetry of movement phrasing. One's dancing self is cultivated through the

individual as well as the ensemble movement process. Relevant readings, written reflections, rehearsals, and performance projects augment and enhance the technical growth. Credit: two semester hours. Distribution Requirements: HE, ME.

DMS 202 Upper Level Technique—Ballet

A more advanced study of the technique of ballet. Development of skill in the tradition of balletic forms is encouraged with an emphasis on alignment and expressiveness. Focus is on ease of motion while increasing physical understanding of ballet vocabulary. In addition to physical practice, the examination of ballet includes reading, observing performances, and writing. Credit: two semester hours. Distribution Requirements: HE, ME.

DMS 204 Jazz Dance II

A further exploration of cultural, creative, educational, and technical aspects of American Jazz Dance. Particular attention is paid to similarities and differences in Jazz Dance styles and origins. Credit: two semester hours. *Prerequisite: DMS 104.* Distribution Requirements: HE, ME.

DMS 205 Tap Dance II

A direct extension of Tap Dance I. This course helps students develop a more complete understanding of Tap History, Terminology and Techniques. Students also examine the styles of significant Tap Dance choreographers and begin to learn basic Tap Dance notation. Credit: two semester hours. *Prerequisite: DMS 105.* Distribution Requirements: HE, ME.

DMS 207 Ballroom Dance II: Latin/Rhythm

An in-depth exploration of Latin Dance forms. Through practice, text, and film, this inquiry extends the exploration of the Latin/Rhythm social dance forms begun in Ballroom Dance I. Lectures, film, discussion, and papers illustrating the forms and culture of ballroom dancing are required. Credit: two semester hours. *Prerequisite: DMS 107.* Distribution Requirements: HE, ME.

DMS 208 Ballroom Dance II: Smooth

An in-depth exploration in one or more previously introduced dance forms that extends the practice of Smooth dance begun in Ballroom Dance I. Origins and evolutions of at least one form are investigated through text, film, discussion, and writing. Credit: two semester hours. *Prerequisite: DMS 107.* Distribution Requirements: HE, ME.

DMS 210 Yoga II

An investigation of the principles of classic and contemporary Yoga as applied to the individual's personal practice. The underlying theme is that of transformation. Sequencing of classical postures for the practitioner is highlighted. The development of ease in stillness prepares the student for prolonged concentration, contemplation, and meditation. Additional explorations focus on enhancing skill in relationship. Credit: two semester hours. *Prerequisite: DMS 110.* Distribution Requirements: HE, IP.

DMS 214 Asian Martial Arts II

An in-depth exploration in the style of martial arts introduced in Asian Martial Arts I. Students continue to explore the historical, cultural, and philosophical bases of the particular Asian martial art. Focus is placed on martial arts as a way of life and a pursuit of discipline, control, and fortitude. Credit: two semester hours. *Prerequisite: DMS 114 and permission of the instructor.* The course requires a small additional fee and may be held a short distance off campus. Distribution Requirements: HE, IP.

DMS 301 Modern Dance III

Continued practice in the development of movement skills for the dancer's expressive voice. Emphasis is placed on more challenging individual and ensemble movement phrases. Credit: one semester hour. *Prerequisite: DMS 201.*

DMS 302 Ballet III

Continued skill building in the expressivity and technical proficiency of the ballet form. Emphasis is placed on the individual's practice of ballet barre and across the floor sequences. Credit: one semester hour. *Prerequisite: DMS 202.*

DMS 304 Jazz Dance III

Continued study of the techniques of American Jazz Dance. Focus is placed on the development of technical proficiency in the various styles of jazz. Credit: one semester hour. *Prerequisite: DMS 204.*

DMS 305 Tap Dance III

Continued practice in the various styles of Tap Dance. The development of skills introduced in previous courses is encouraged. Credit: one semester hour. *Prerequisite: DMS 205.*

DMS 307 Ballroom III—Advanced

An advanced exploration designed to develop timing, technique, styling, and phrasing of Ballroom dance forms through practice and performance. Emphasis is placed on the development of movement continuity and advanced styles characteristic of specific ballroom styles. Amalgamation of the movements, technique, footwork, and style into choreography is expected at this level. Final performance is required. Credit: two semester hours. *Prerequisite: DMS 207 or DMS 208 or permission of the instructor.* Distribution Requirements: ME.

DMS 310 Yoga III

Continued study in the sequencing of classical postures and the development of breathing practices to sustain concentrated states of meditation and contemplation. Credit: one semester hour. *Prerequisite: DMS 210.*

DMS 314 Asian Martial Arts III

Continued practice in the style of martial arts taken in Asian Martial Arts II. Focus is placed on the development of technical proficiency, including power, balance, and technique. May be repeated for credit. Credit: one semester hour. *Prerequisites: DMS 214 and permission of the instructor.* The course requires a small additional fee and may be held a short distance off campus.

DMS 370 Creative Processes: Choreography and Improvisation

An investigation of the conception, selection and organization required for making dances. Readings, viewings, critiques, discussions, performances and papers are required. Distribution Requirements: HE, ME.

DMS 371 Creative Processes II: Exploring the use of Costumes, Props, and Scenic Element

An analysis of the relationship of costume, prop, and scenic elements to the process of dance making. Emphasis is on the distinction between first (elemental) and second (narrative) functional intention of dances from the perspective of both artist and audience. Requirements include active participation in movement improvisations, choreographies, class discussions, assigned texts, peer reviews, written critical reflections, and a final synthesis paper. *Prerequisite: DMS 370.* Distribution Requirements: HE, ME.

DMS 372 Creative Processes III: Exploring Music

An analysis of the relationship of music to the process of dance making. Emphasis is on the imaginative synthesis of music and dance forms. Requirements include active participation in movement improvisations, personal choreographies, class discussion, peer reviews, attendance at performances, assigned texts, and written critical reflections. *Prerequisites: DMS 370 and DMS 371.* Distribution Requirements: HE, ME.

DMS 410 Yoga Theory

An investigation of the philosophical ground in the practice of yoga, which was codified by Patanjali some 2500 years ago and remains a living tradition. Through classic and contemporary sources students learn how yoga is at once an art, science, and vision of the human body, mind, and soul. Credit: two semester hours. Distribution Requirements: HE, IP.

DMS 470 History of Contemporary Dance

An examination of modern and postmodern dance. Of particular interest are the political, social, and artistic environments that have formed and continue to reform genres of dance. The study includes global influences on the nature of dance. *Prerequisite: Permission of the instructor.* Distribution Requirements: ME, PD.

DMS 520 Internship in Dance Studies

Intensive work in one or more of the following dance studies educational outreach programs: Creating Landscapes for Children and Teens; Aesthetic Education Symposia for Teachers; Middle School Arts Exploration and Immersion Programs; High School Programs for the Gifted and Self-Identified Talented. Interns collaborate in planning, administering and evaluating programs. In addition, they share in the development of exhibitions, performances, and publications of student-generated work. Discussions and written reflections, which synthesize experiences of doing and researching, are grounded in seminal arts education texts. Credit: two to four semester hours. *Prerequisite: Permission of the instructor.*

DMS 529 Internship: Dance and Movement Studies

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

DMS 580 Movement and Meaning: Experiencing, Observing, and Analyzing Movement as a Primary Text

An investigation into the use of movement observation and analysis as a tool for research in the arts and sciences. Both individual explorations and group movement interactions are viewed through the aspects of body utilization, effort dynamics, spatial awareness, and shape changes. Movement analysis is applied to a variety of fields, such as dance, sports, therapy, education, child development, cultural studies, and non-verbal communication. *Prerequisites: DMS 100 and one introductory practice course (DMS 101 through DMS 200).*

DMS 590 Independent Study

An independent study or research experience. The student independently pursues a topic or project of interest with guidance from a faculty member. Students meet one-on-one with the faculty mentor on a regular basis and also complete independent readings, laboratory work, or comparable activities. Credit: One to four semester credit hours. *Prerequisite: Permission of the instructor.*

Sophomore Seminar

FSDMS 201 Dance: Ritual of Experience

An exploration of ritual and ceremonial dances from multiple cultural perspectives, drawing upon insights into dance as human thought and as physical, cultural, social, economic, psychological, political and communicative behavior. Of particular interest is the role dance plays in the expression of both resistances to and maintenance of cultural expressions of power and value. Special emphasis is placed on relating each student's personal experience of dance to the topics covered. Effective writing and speaking within the guidelines of the discipline is emphasized. May count toward a minor in Dance and Movement Studies.

Economics

Professors Onyeiwu (Chair), Allison, Baskan, Bilo, Golden, Martin, Nguyen, Nonnenmacher, Ormiston, Park, Sickafuse

Economics is a social science that studies the production, distribution, and consumption of goods and services. The scarcity of human, natural, and other resources requires that these activities be organized to enhance the general welfare of society. Economic activity is organized at many levels, including firms, markets, and governments, and the economics curriculum offers students the opportunity to study decision-making and the consequences of those decisions at all of these levels. The curriculum includes a core of widely accepted general theory and techniques for testing hypotheses and drawing inferences. These theories and techniques are refined by their application to concrete cases in a wide offering of elective courses and co-curricular activities.

The Department of Economics trains students to think analytically about social issues and prepares them to be responsible and productive citizens in a dynamic and diverse world. Many of our alumni pursue graduate study in business, economics, education, finance, international affairs, law, and public policy and enter careers in business and public service.

Economics Learning Outcomes

Students who successfully complete an Economics major are able to:

- Explain the basic elements of economic models.
- Identify important economic actors, organizations, and institutions and describe their role and impact.
- Understand and interpret statistical measures and techniques.
- Use the spoken and written word, graphs, and mathematics to present economic phenomena and arguments.
- Evaluate multiple economic arguments and multiple sources of evidence.
- Propose and model economic hypotheses.
- Collect relevant data for use in qualitative and quantitative research methods.
- Evaluate economic arguments and policy proposals using empirical methods.

The Economics Major

Economics majors are required to have a GPA of at least 2.0 in departmental courses at graduation. Only Economics courses taken at Allegheny on a letter grade basis are included in the GPA calculation. For repeated courses, only the most recent grade is included. All courses required for the major must be taken on a letter grade basis except one of the introductory courses (ECON 100 or ECON 101). Students may present a total of 12 semester hours of transfer credit toward the major; exceptions must be approved by the department chair.

Requirements for the Economics Major:

1. **Two introductory courses:**
 - ECON 100 *Introduction to Microeconomics*
 - ECON 101 *Introduction to Macroeconomics*
2. **Two intermediate theory courses** (should be completed by the end of the junior year):
 - ECON 200 *Microeconomic Theory*
 - ECON 201 *Macroeconomic Theory*
3. **Two courses in economic statistics** (should be completed by the end of the junior year):
 - ECON 202 *Economic Statistics*
 - ECON 203 *Economic Statistics II*
4. **Two 200-level elective courses.** *Note:* ECON 286 *cannot* be used to satisfy the 200-level elective requirement.
5. **Two 400-level elective courses.** ECON 385 or ECON 386 can substitute for one of the 400-level courses.
6. **A Seminar** (ECON 570–ECON 589). Typically taken in the first semester of the senior year.
7. **The Senior Project**, ECON 620. Typically taken in the second semester of the senior year.

The 200-level elective courses generally have only introductory micro and/or macroeconomics as a prerequisite, whereas the 400- and 500-level courses generally require ECON 200 and ECON 201. Courses numbered ECON 210–ECON 289 are

intended to be primarily informational, institutional, historical, or philosophical in nature, while the 400-level courses are more theoretical, empirical or quantitative in emphasis.

Students considering a major in Economics are advised that ECON 200, ECON 201, and ECON 202 are calculus-based and have MATH 157 or MATH 160 as prerequisites.

Track in Managerial Economics

A field has emerged at the intersection between traditional economics and business. It involves new understandings of how organizations succeed within their competitive environments and the roles managers play in fostering success. To recognize this area of specialization, the department offers a track in Managerial Economics within the major. This program is an especially appropriate preparation for a career in management or related fields (e.g., law, public policy, or entrepreneurship) or for graduate education in these areas. Through case studies, internships, and interactions with practicing managers, students learn how economic theory and quantitative methods can be used to solve managerial and business problems.

Requirements for the Managerial Track in Economics:

1. **Two introductory courses:**
 - ECON 100 *Introduction to Microeconomics*
 - ECON 101 *Introduction to Macroeconomics*
2. **Two intermediate theory courses** (should be completed by the end of the junior year):
 - ECON 200 *Microeconomic Theory*
 - ECON 201 *Macroeconomic Theory*
3. **Two courses in economic statistics**(should be completed by the end of the junior year):
 - ECON 202 *Economic Statistics*
 - ECON 203 *Economic Statistics II*
4. **Three courses in Managerial Economics:**
 - ECON 240 *Introduction to Managerial Economics*
 - ECON 285 *Fundamentals of Financial Accounting* (ECON 160 may be substituted)
 - ECON 440 *Advanced Managerial Economics*
5. **One 200-level elective**
6. **One of** ECON 385 *Intermediate Accounting*, ECON 386 *Cost Accounting*, or a 400-level elective in Economics
7. **A Seminar** (ECON 570-580)
8. **The Senior Project**, ECON 620

International Economics and Business

Those students wishing to pursue a career in International Economics or business should combine the study of a particular country and language with a background in Economics. If students are majoring in Economics and minoring in a language, they should take ECON 251, ECON 256, or ECON 265 as their elective 200-level course and ECON 452 as their elective 400-level course. Students majoring in a language and minoring in Economics should take ECON 251, ECON 256 and/or ECON 265, in addition to ECON 240. In addition, students are encouraged to study abroad and to complete an internship either abroad or with a company engaged in international trade. Students may also select a double major in these two disciplines. For an example of language courses that complement a Managerial Economics track major or Economics minor, see the course of study described in the "German" section of this *Bulletin*.

Graduate Study

Those students intending to pursue graduate study in economics or business should note that these graduate programs usually require a high performance in Economics courses and a thorough understanding of mathematics and quantitative methods. For graduate study in Economics, the recommended minimum is mathematics courses through linear algebra. Proficiency in a second language may also be required. Courses in Political Science may be required for admission to some of the special graduate programs, such as those in city planning and urban affairs.

The Economics Minor

Course sequences suggested for the development of various interests are available from department faculty. All courses for the minor except one of ECON 100 or ECON 101 must be taken on a letter grade basis. Students may present a total of 8 semester hours of transfer credit toward the minor; exceptions must be approved by the department chair.

Requirements:

1. ECON 100 *Introduction to Microeconomics*
2. ECON 101 *Introduction to Macroeconomics*
3. ECON 200 *Microeconomic Theory* or ECON 201 *Macroeconomic Theory*. MATH 157 or MATH 160 or a sufficient mathematics background (requiring permission of the department chair) is prerequisite to ECON 200 and ECON 201.
4. Three additional courses in Economics numbered ECON 200 or higher.

Economics Courses

Financial Literacy

ECON 010 *Financial Literacy*

An introduction to the economic principles of personal financial management and planning. Topics include the forms and pitfalls of credit; instruments and strategies for saving; and the planning and budgeting of financial goals. Readings, hands-on exercises, and guest speakers present these topics with academic rigor, while allowing each student to tailor them to his or her own situation. ECON 010 does not count toward a major or minor in Economics. Distribution Requirements*: QR, SB.

**This course counts as Social Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

Introductory Economics

ECON 100 *Introduction to Microeconomics*

An introduction to the market behavior of individuals, households, and firms. Topics include the concept of opportunity cost, the derivation of supply and demand curves, the analysis of markets as a means to allocate scarce resources, the analysis of various market structures, the impact of government controls on the economy, and the measurement of social costs and benefits. Distribution Requirements: QR, SB.

ECON 101 *Introduction to Macroeconomics*

An introduction to measurement and analysis of national income, employment, and the price level. Topics include unemployment, savings and investment, inflation, economic growth, the banking system, business cycles, and the short-run and long-run effects of monetary and fiscal policy. Distribution Requirements: QR, SB.

Intermediate Theory and Statistics

ECON 200 *Microeconomic Theory*

Study of the theories of consumer and firm behavior, economic efficiency and welfare. Analysis of markets, resources, and general equilibrium is made. *Prerequisites: One micro-based introduction to economics course (a macro-based introduction to economics course is also recommended) and MATH 157 or MATH 160.* Must be taken on letter grade basis by majors. It is recommended that this course be taken prior to the second semester of the junior year. Distribution Requirements: QR, SB.

ECON 201 *Macroeconomic Theory*

A development of theories concerning the determination of output, prices, and employment, the hypotheses upon which these theories are founded, and their implications for policy programs. *Prerequisites: One micro-based and one macro-based introduction to economics course and MATH 157 or MATH 160, by permission of the instructor.* Must be taken on letter grade basis by majors. It is recommended that this course be taken prior to the second semester of the junior year. Distribution Requirements: QR, SB.

ECON 202 Economic Statistics

An introduction to the basic components of statistical analysis necessary for applied economic research. Basic concepts of probability, probability distributions, random sampling, point estimation, interval estimation and hypothesis testing are covered. Special attention is focused on the development of multiple regression analysis. *Prerequisites: One micro-based and one macro-based introduction to economics and MATH 157 or MATH 160.* Must be taken on letter grade basis by majors. It is recommended that this course be taken prior to the second semester of the junior year. Distribution Requirements: QR.

ECON 203 Economic Statistics II

Fundamental statistical measures and models from ECON 202 are reviewed and more fully developed, with applications to economic theory and data. Topics include confidence intervals, hypothesis testing, and the multiple regression model. The use of computers for statistical analysis is an integral part of the course. It is recommended that this course be taken before the end of the junior year. Distribution Requirements: QR.

Philosophical, Institutional and Historical Electives

ECON 226 Money and Financial Institutions

A study of the activities of commercial banks and other financial institutions, the structure and operation of the Federal Reserve System, and the role of each in determining the supply of money and credit. The mechanism whereby money affects economic activity and the role of monetary policy in pursuing society's goals is examined. *Prerequisite: ECON 100 and/or ECON 101.* Distribution Requirements: QR, SB.

ECON 227 Introduction to Finance

A study of key issues in financial economics ranging from asset pricing to corporate finance. Topics include an overview of the financial system and various asset classes, present value, discounting, risk and return, capital asset pricing, arbitrage pricing theory, financial derivatives, pecking order theory of capital structure, and the efficient market hypothesis. Topics are then applied to financial crises and policy responses in a way that highlights the connection between finance and the real economy. *Prerequisites: ECON 100 and ECON 101.* Distribution Requirements: QR, SB.

ECON 231 Environmental Economics and Policy

An examination of the economic factors leading to environmental degradation and the range of policy options available to limit their effects. Theories based on externalities and property rights are introduced, and command and control, economic incentive, and market-based approaches to environmental regulation are evaluated and compared. *Prerequisite: ECON 100.* Distribution Requirements: CL, SB.

ECON 234 Human Resource Management

An examination of organizational policies and practices and their influences on employee behavior. The individual, team, and organizational effects of recruiting, selection, training, development, compensation, and labor relations strategies are analyzed. The influence of employment law and the psychosocial aspects of the workplace are discussed. *Prerequisite: ECON 100 and/or ECON 101.* Distribution Requirements: CL, SB.

ECON 238 Poverty, Inequality, and Efficiency

An examination of the characteristics of the poor in the United States and around the world. Current measures of poverty and inequality are examined in context of the trends in poverty over time and the causes of poverty and income inequality. The fundamental efficiency and equity concerns of social welfare policy are investigated. The class examines other key topics using real world examples, such as poverty and race, gender, immigration, education, and international development strategies on extreme poverty. *Prerequisite: ECON 100 and/or ECON 101.* Distribution Requirements: CL, PD.

ECON 240 Introduction to Managerial Economics

An exploration of the roles and responsibilities of the corporation in society, decision-making processes in business and other kinds of organizations, and basic concepts used by managers. Students examine the goals and organizational structures of firms; strategies for surviving in a competitive global economy; corporate ethics; relations with employees, investors, and other stakeholders; the regulatory environment; and the implications of globalization for today's managers. Managerial economics draws upon a variety of sub-disciplines, including theory of the firm, industrial organization,

Economics

corporate finance, accounting, and international trade. Case studies are used throughout to allow students to apply the theories to real world situations. *Prerequisite: ECON 100 and/or ECON 101.* Distribution Requirements: SB.

ECON 248 Law and Economics

An investigation of the contributions of economic theory to the core areas of the law, e.g., property, contracts, torts, civil procedure, and criminal law and procedure. The course compares economic and noneconomic theories of law and addresses the strengths and limitations of the economic approach. *Prerequisite: ECON 100 and/or ECON 101.* Distribution Requirements: CL, SB.

ECON 250 Issues in Financing Health Care

An examination of the competing interests of the users, providers and financiers of health care. An exploration of reform proposals by these three groups in terms of their economic feasibility is included. Another objective is to frame questions of health care finance so as to better define the appropriate methodologies for their meaningful analysis. Students run through exercises in posing a well-defined question and designing an approach to its study, including data sources and relevant relationships to be included in the analysis. *Prerequisite: ECON 100 and/or ECON 101.* Distribution Requirements: IP, PD.

ECON 251 International Economics

A study of international economic relationships in theory and practice. The bases of an international division of labor, international financial arrangements and agencies, balance of payment problems, trade policies of nations, trade and development, regional economic integration, and the multi-national corporation are among the principal topics discussed. *Prerequisite: ECON 100 and/or ECON 101.* Distribution Requirements: IP, QR.

ECON 256 Economic Development

An examination of the problems of the less developed countries in achieving adequate economic development. The role of resources, human and physical; patterns of trade and specialization; international investment and the transfer of technology; the role of international agencies; development strategies; and development planning are some of the principal topics explored. *Prerequisite: ECON 100 and/or ECON 101.* Distribution Requirements: CL, IP.

ECON 265 The Economy of China

An examination of the contemporary economy of China with a focus on the transition since 1978 from a centrally planned to a market-oriented system. Students explore how China has achieved success in economic growth, reflect on whether this growth is sustainable given unique cultural, political, and social backgrounds, and discuss interactions between the United States and China and policy options America faces in coping with China. Specific topics include fiscal and monetary policies, trade and export strategies, rural development, the privatization process, social and cultural background, and the impact of WTO accession on the current and future economy of China. Distribution Requirements: IP, SB.

ECON 280 Economics of Entrepreneurship I

A study of the economic role and principles of entrepreneurship. Entrepreneurship is a combination of many disciplines including law, business theory, history, psychology, political science, economics, and in many instances, just plain intuition. Topics covered include the development of various business models, the economic impact of antitrust laws, the social and economic implications of "globalization," the psychology of management, and an analysis of some current buzzwords such as the "new economy" and "e-commerce." Students are exposed to the disparate requirements of taking an idea (not necessarily their own) and creating an economically viable enterprise that can sustain itself. *Prerequisite: ECON 100 and/or ECON 101.* Distribution Requirements: QR, SB.

ECON 285 Fundamentals of Financial Accounting

Introduction to methods of recording, classifying, and summarizing financial data. Required for the Managerial Economics track. Distribution Requirements: QR, SB.

Note: Students who have received credit for ECON 160 may not also receive credit for ECON 285.

ECON 286 Fundamentals of Managerial Accounting

Study of the uses of accounting data to make basic managerial decisions of the firm. Comparisons between managerial decision-making and economic theory of the firm will be made. *Prerequisite:* ECON 285. Distribution Requirements: QR, SB.

Note: Students who have received credit for ECON 170 may not also receive credit for ECON 286. Either ECON 160 or ECON 285 is a satisfactory prerequisite for ECON 286.

Intermediate Accounting and Entrepreneurship

ECON 380 Economics of Entrepreneurship II

An exploration of the skills necessary to create a new business or secure funds to expand an existing one. Student teams produce business plans with three major functions: an outline of the business and its financing needs for use in obtaining funding, an exercise in the planning process, and a document used to measure the progress of the enterprise. Topics include forms of organization, sources of competitive advantage, entry and growth strategies, technology and personnel policies, and cash flow analysis. *Prerequisites:* One micro-based or one macro-based introduction to economics course and ECON 280. Distribution Requirements: QR, SB.

ECON 385 Intermediate Accounting

Theory and procedures used to account for the assets, liabilities, and equity of corporate enterprises. *Prerequisite:* ECON 286. Distribution Requirements: QR, SB.

Note: Students who have received credit for ECON 360 may not also receive credit for ECON 385. Either ECON 170 or ECON 286 is a satisfactory prerequisite for ECON 385.

ECON 386 Cost Accounting

Methods and systems used by various enterprises to develop estimates of costs and techniques for controlling costs of operation. *Prerequisite:* ECON 286. Distribution Requirements: QR, SB.

Note: Students who have received credit for ECON 370 may not also receive credit for ECON 386. Either ECON 170 or ECON 286 is a satisfactory prerequisite for ECON 385.

Advanced Economic Electives

ECON 421 Strategic Environmental Management

Explores how companies seek profit opportunities by reducing costs associated with environmental impacts and by satisfying market demand for ecologically sound products. Economic theories of the firm and theories of sustainable development provide the analytical framework. Various templates for building environmental management systems are reviewed, along with the corporate sector's progress toward sustainable business practices. *Prerequisites:* ECON 100 and ECON 240, or permission of the instructor. Distribution Requirements: CL, SB.

ECON 426 Monetary Economics

An exploration of the role money and monetary policy play in the domestic and external (trade) sectors of the economy. Starting with the basics of financial institutions, we discuss the policy tools by which authorities monitor the supply of liquidity. We analyze and compare the impacts of various policy measures in different phases of business cycles. Eventually we focus on the connection between domestic monetary policy and the balance of payments, extending the discussion to the essentials of currency markets. Central Bank intervention in currency markets, the role of expectations, speculation, and underlying trade flows affecting currency values are presented in a systemic context. *Prerequisite:* ECON 201. Distribution Requirements: QR, SB.

ECON 427 Theory of Finance

Organized around the objective of maximizing the stockholder wealth within a set of corporate risk-return characteristics. Major topics include financial analysis and planning, capital budgeting, evaluation and cost of capital, capital asset pricing, and long-term financing. *Prerequisites:* ECON 200 and ECON 202, or permission of the instructor. Distribution Requirements: QR, SB.

ECON 430 The Economic Analysis of Politics

A study of the political arena through the lens of economic analysis. Economics studies purposeful behavior, and its tools apply not only to market participants but also to participants in the political process. Politicians, bureaucrats, and voters could be viewed therefore as self-interested individuals who do not necessarily desire to promote the public good. The lectures and discussions include applications of this economic theory of politics to voting, corruption, revolutions, dictatorship, and macroeconomic policies. *Prerequisites: ECON 100 and ECON 101.* Not open to first-year students. Distribution Requirements: CL, SB.

ECON 440 Advanced Managerial Economics

Application of statistical methods and economic theory to managerial decision making. The course covers a range of analytical tools useful in solving problems that arise in managing firms' operations. Particular examples include regression analysis, linear programming, forecasting, time value of money, break-even analysis, statistical quality control, pricing, production, demand and cost functions. *Prerequisites: ECON 200, ECON 202, and ECON 240.* Distribution Requirements: QR, SB.

ECON 441 Public Finance

An investigation of the effects of governmental taxation. Topics include income redistribution, public goods, welfare economics, and the efficiency and equity implications of various types of taxation. *Prerequisite: ECON 200.*

ECON 448 Organizations and Contracts

An exploration of the costs of organizing economic activity. Topics include the determination of the scale and scope of the firm, the consequences of separating control from ownership, and the transaction costs of contracting in the marketplace. Theoretical work is followed by case studies of several industries, including aerospace, coal, oil, air traffic control, and automobile. *Prerequisites: ECON 200 and ECON 202, or permission of the instructor.* Distribution Requirements: SB.

ECON 451 International Business

A study of the theories of global competition and the strategies corporations use in competing in foreign markets. The role of multilateral organizations such as the World Trade Organization, the United Nations Global Compact, and the International Chamber of Commerce is explored. Through case studies, students learn about the political, cultural, environmental, legal, and ethical dilemmas that corporations encounter when operating in foreign markets. Some of the stylized concepts that business executives and political economists use in analyzing the dynamics of the global economy are discussed. *Prerequisite: ECON 200 or ECON 201.* Distribution Requirements: IP.

ECON 452 Theory of Trade

An exploration of the macroeconomics of an open economy. Topics include the balance-of-payments, exchange rate markets, and external borrowing for developing countries. The production and consumption possibilities of trading partners are analyzed in a general equilibrium framework. The roles of tariffs, trade quotas, and pegged exchange rates as appropriate policies for the achievement of domestic and international economic goals, as well as means of international economic cooperation, are discussed. *Prerequisites: ECON 200 and ECON 201, or permission of the instructor.* Distribution Requirements: IP, QR.

ECON 466 Introduction to Econometrics

Regression analysis, its basic assumptions, and the consequences of the violations of those basic assumptions. Related problems, such as collinearity, identification, autocorrelation, and tests of significance, are included. These techniques are used to measure the relationships between and among selected microeconomic and macroeconomic variables. Applied econometric research with computer usage in areas of student interest is included. *Prerequisites: ECON 200 or ECON 201, ECON 202, and ECON 203; or permission of instructor.* Distribution Requirements: QR.

ECON 470 The Mathematical Approach to Economics

Mathematical development of the basics of modern economic theory. Applications and examples are drawn from the major fields of Economics, such as international, monetary and fiscal theory. Mathematical techniques such as calculus, differential equations, and linear algebra are utilized. *Prerequisites: ECON 200 and ECON 201, or permission of instructor.* Distribution Requirements: QR.

Internships

ECON 501 Meadville VITA: Tax Internship

An experiential internship program focusing on income tax preparation in the United States and experiences with income taxes and the residents of western Crawford County. Students study the rules for income tax preparation, pass a test about taxation designed by the IRS, and complete software training for tax preparation. Students complete 5-6 hours of tax preparation in the Meadville community for 10 weeks and also complete regular reflection exercises about their work, their learning, and their experiences. Credit: One to four semester hours.

ECON 529 Internship: Economics

An experiential learning seminar designed to enable students to understand how businesses and non-profit organizations use economic principles to solve practical problems. Students learn about various careers, gain on-the-job experience, understand the culture of the workplace, and acquire practical skills that prepare them for future careers. Students are placed as interns in a firm or organization, as well as meet regularly with the seminar instructor. Credit: One to four semester hours. *Prerequisites: ECON 100, ECON 101, and at least two 200-level Economics courses.*

Seminars

Required of majors in Economics and generally taken in the first semester of the senior year. Students should complete ECON 200, ECON 201, ECON 202, and ECON 203 before taking a seminar.

ECON 578 Topics in Economic Development

A study of the factors and constraints influencing economic growth and development. Topics may include poverty and income inequality, human capital and education policy, migration and urbanization, the environment and sustainable growth, and issues in international trade and globalization. Students choose research topics based on their interests. *Prerequisites: ECON 200, ECON 201, ECON 202, and ECON 203.*

ECON 579 The Employment Relationship

An examination of the employee-employer relationship through the lenses of labor and personnel economics, human resource management, and organizational behavior. Topics may include the economic impact of organized labor, the role of public policy and labor market institutions, evolution in management theory, job satisfaction and employee motivation, and a historical/cultural perspective of work in the United States. *Prerequisites: ECON 200, ECON 201, ECON 202, and ECON 203.*

ECON 581 Business Cycles

A survey of the historical record of business cycles in the U.S. Methods of measuring and modeling cyclical activity are discussed. Individual student research is then conducted on selected business cycle models.

ECON 582 Topics in International Economics

A study of international economic relations. Topics may include trade flows and policies, currency markets, and the impact of trade and globalization on output, employment, and prices in trading countries. Research may also focus on international institutions such as IMF and WTO and their roles in economic development. Choice of seminar paper topic is up to students based on their interests; however, everyone is expected to collaborate and contribute to the research of others in the group. *Prerequisites: ECON 200, ECON 201, and ECON 202.*

ECON 584 Topics in Industrial Organization

Selected topics in the theory and application of Industrial Organization. Discussion and research may include strategic interaction among firms, levels of advertising and product differentiation, vertical and horizontal integration, antitrust policy, regulation, network economics, and the development of the historical development of the firm. Students choose research topics to complement their senior projects. *Prerequisites: ECON 200 and ECON 202.*

ECON 586 Special Topics in Labor Issues

An examination of topics in labor economics, such as human capital, compensating wage differentials, discrimination, unions, mobility, and incentive pay schemes. Material includes an analysis of the wage and employment effects of various public policies.

ECON 587 Transformation of the Global Economy

Market and non-market economies are critically examined. Case studies of selected countries will be followed by comparative economic performances.

ECON 588 Topics in Managerial Economics

A capstone seminar for economics majors in the managerial track. A case study format is used to encourage integrated application of standard economic theory and managerial economics fields (like strategic management, finance, accounting, statistics, ethics, and technology management) to the complexities of real strategic management problems. Students choose case-related research paper topics that reflect both significant real world management questions and applicable theoretical frameworks. Case and research reports provide training in project analysis and presentation, both verbal and written, and opportunities to broaden and integrate knowledge of the intellectual, institutional, and historical contexts of the management environment. *Prerequisites: ECON 240 and ECON 440.*

ECON 590 Independent Study

An independent study or research experience. The student independently pursues a topic or project of interest with guidance from a faculty member. Students meet one-on-one with the faculty mentor on a regular basis and also complete independent readings, laboratory work, or comparable activities. Credit: One to four semester credit hours. *Prerequisite: Permission of the instructor.*

Senior Project

ECON 620 Senior Project

A graded course required of Economics majors generally taken in the second semester of the senior year. Students should enroll in a workshop section with the instructor who has agreed to supervise the Senior Project. Entails mainly the writing and defense of the Senior Project. Credit: Four semester hours.

Sophomore Seminar

FSECO 201 Communication in a Discipline

*Economics**

An exploration of oral and written communication with a focus on communication within a specific academic field. Students investigate the conventions of communication in the discipline and the methods by which practitioners position their work within larger disciplinary contexts. *Prerequisite: FS 102.* The course must be taken on a letter grade basis.

*The topical material covered in this sophomore seminar varies from section to section and year to year. Some sections of this course may have additional prerequisites.

Education Studies

Professors S. Slote (Director), Asmi, Foreman, Heuchert, Leech, David Miller, Moore, O'Day-Frye, Weisman, Whitenack

Education Studies is an interdivisional minor designed for students interested in the study of learning from political, historical, cultural, and psychological perspectives, as well as for those students intending to pursue education-related careers after graduation. Allegheny has a 200-year history of sending its students into the world as educators and as advocates for the transforming possibilities of education. Effective advocates draw upon a variety of educational models and understand how social and environmental factors impact learning. The liberal arts foundation of the Education Studies minor at Allegheny College seeks to enrich students' ability to understand, to acquire, to disseminate, and to value knowledge about learning from different perspectives and experiences.

Education Studies Learning Outcomes

The Education Studies minor is designed to:

- Provide opportunities for students to explore different domestic and international educational models and philosophies;
- Encourage students to formulate their own educational philosophy and reflect on the connections between content knowledge and pedagogical approaches;
- Teach students how individual learners develop and help students understand the impact of individual learning differences;
- Expose students to issues of privilege, power and difference and their intersection with issues of education;
- Help students become aware of how learners are affected by environmental factors;
- Expose students to the ways different academic disciplines approach issues of education;
- Make students aware of codes of ethical conduct and professional organizations that advocate for learners and on behalf of educational policy and practice;
- Provide coursework and fieldwork opportunities necessary for those students wishing to meet teacher preparation or graduate school requirements.

The Education Studies Minor

The minor in Education Studies requires the successful completion of a minimum of 24 credits of coursework (including 4 required courses and 2 electives). All courses presented for the minor must be taken for a letter grade. At least one elective or the CE/P/P Course must be at the 300 or 400 level.

****Please note that the Education Studies minor is not a professional certification program.****

Students planning to pursue admission to post-graduate certification or Master of Arts in Teaching programs should be aware that additional coursework may be necessary. Please consult the Director of Pre-Professional Studies in the Gateway for information about these programs. For academic advising in Education Studies, please contact the Education Studies Program Director.

Because this program is interdivisional, students who minor in Education Studies may complete any major to satisfy the college requirement that the major and minor be in different divisions.

Requirements. Please note: courses marked with an asterisk (*) have a prerequisite.

- EDUC 100 *Introduction to Education Studies* (four credits)
- A Culture & Education, Practice, and Policy Course (four credits). Choose one course from the list of approved CE/P/P courses appended below.
- EDUC 529 *Internship: Education Studies* and EDUC 540 *Internship in Education Seminar* (2+2 credits; four credits total)*
- EDUC 585 *Education Capstone Seminar**
- Electives (eight credits). Choose two:
- EDUC 150 *Foundations of Special Education*
- EDUC 160 *Teaching English Language Learners*

Education Studies

- EDUC 270 *Literacy Practicum*
- ENGL 350 *Children's Literature**
- ENGL 385 *Cultural History of the English Language**
- ENVSC 250 *Environmental Education*
- ENVSC 415 *Environmental Health*
- MATH 135 *Elementary School Mathematics*
- PSYCH 106 *Educational Psychology*
- SOCAN 201 *Introduction to Sociology*

Other courses may be substituted as electives with prior approval of the steering committee for the minor. Additionally, students are strongly encouraged to take a minimum of two courses in the natural sciences.

Culture & Education, Practice, and Policy (CE/P/P) Courses. One course from the list below must be presented for the Education Studies minor. Courses are grouped to provide guidance for students interested in pursuing one of three focus areas in Education Studies: 1) Practice (for students planning to pursue careers in elementary or secondary Education); 2) Policy (for students interested more broadly in education policy); 3) Culture and Education (for students interested in the intersection of national or international cultures and issues of education). Courses marked with an asterisk (*) have a prerequisite.

Culture and Education (for students interested in the intersection of national or international cultures and issues of education):

- BLKST 100 *Introduction to Black Studies*
- COMRT 351 *Media and Identity**
- ENGL 204 *Studies in African American Literature*
- ENGL 211 *Women and Literature*
- ENGL 321 *Literature of Diversity in North America**
- ENGL 322 *Advanced Studies in African American Literature**
- ENGL 324 *Latino/a Literature**
- HIST 117 *Modern Latin American History*
- HIST 119 *West African Civilizations*
- HIST 173 *History of South Africa*
- HIST 353 *Women and Revolution in China**
- HIST 359 *Apartheid in South Africa and Beyond*
- HIST 361 *Race and Identity in the Atlantic World*
- RELST 215 *Gender and Sexuality in the Islamic World*
- WGSS 100 *Intro to Women's, Gender, and Sexuality Studies*
- WGSS 211 *Queer Lives*
- WGSS 306 *A Cultural and Evolutionary History of Sexuality*

Practice (for students planning to pursue careers in elementary or secondary Education):

- BLKST 257/HIST 257 *African-American History since 1865*
- COMRT 120 *Introduction to Critical Media Studies*
- COMRT 251 *Gender in Public Communication*
- COMRT 256 *Power, Politics and Communication*
- HIST 261 *A Survey of American Women's History*
- HIST 332 *Problems in Contemporary America**
- HIST 339 *Problems in the History of American Women**
- PSYCH 375 *Community Psychology**
- PSYCH 423 *Gender and Families**
- PSYCH 440 *Psychology of Language**
- PSYCH 451 *Psychology of the African-American Experience**
- PSYCH 452 *Psychology of Prejudice**
- PSYCH 461 *Bilingualism and Second Language Acquisition**
- PSYCH 480 *Food and Hunger in Society**

Policy (for students interested more broadly in education policy):

- ECON 238 *Poverty, Inequality & Efficiency**
- ENVSC 352 *Environmental Justice*
- ENVSC 425 *Global Health Transitions*
- GHS 130 *Introduction to Global Health*
- PHIL 140 *Ethics and Community*
- PHIL 210 *Oppression and Liberation*
- PHIL 310 *Global Justice**
- POLSC 245 *Politics of Third World Development*
- POLSC 261 *U.S.–Latin American Relations*
- POLSC 303 *Constitutional Law: Civil Rights and Liberties*
- POLSC 321 *Urban Government and Politics*
- POLSC 450 *Politics and Psychology of Persuasion and Prejudice*
- WGSS 210 *Social Movements in Women's, Gender, and Sexuality Studies*

Education Courses

EDUC 100 *Introduction to Education Studies*

An interdisciplinary introduction to theories of learning, disseminating knowledge, and contemporary issues of education. Students examine how different cultures and individuals have described the ideal goals and practices of learning. Drawing on these readings, students develop their own pedagogical philosophy and test it against contemporary educational policies and trends. Students are introduced to qualitative and quantitative research data in education. Emphasis is placed on class discussion and on refining analytical and research skills. Distribution Requirements: CL, PD.

EDUC 150 *Foundations of Special Education*

An introduction to teaching children with disabilities and a survey of best practices for working with such individuals. Topics include principles and practices of assessment, instruction, curriculum design and modification, and pupil evaluation. Legal aspects, diversity issues, teamwork, and family involvement are also considered. Field experience is provided. The course satisfies the Foundations of Special Education course requirement for students planning to pursue teaching certification for Elementary Education in the State of Pennsylvania. Distribution Requirements: CL, PD.

EDUC 160 *Teaching English Language Learners*

A study of the challenges of English Language Learners (ELLs) and a survey of best practices for teaching such individuals. Topics include legal responsibilities, advocacy for ELLs, socio-cultural considerations of ELL populations, assessment of programs, and instructional adaptation. Emphasis is placed on the instruction of children in an educational setting, and field experience is provided. The course satisfies the Teaching English Language course requirement for students planning to pursue teaching certification for Elementary Education in the State of Pennsylvania. Distribution Requirements: CL, IP.

EDUC 270 *Literacy Practicum*

A service-learning course conducted jointly by Education Studies and the Crawford County Literacy Council ("READ"). Following tutor training, students spend at least 40 hours in service to adult learners through the READ Program in Meadville in supervised situations. Students submit weekly descriptions of tutoring activities and maintain a monthly log of hours served. Students also fulfill a series of academic requirements that include reading and commenting on a series of texts about literacy and completing academic writing assignments that explore literacy issues in more detail. This course must be taken on a letter-grade basis and meets weekly for one hour; tutoring times are arranged on an individual basis. Students are responsible for making travel arrangements to the tutoring site. Distribution Requirements: CL, PD.

EDUC 529 *Internship: Education Studies*

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

EDUC 540 Internship in Education Seminar

A seminar to support internships for students planning to teach at the elementary, middle school, or secondary level. Students complete a corequisite two-credit internship in the local schools at the appropriate grade level for their interest. The seminar integrates students' classroom experiences with educational theory and research. Topics such as ethics, appropriate workplace behavior, and relationships with supervisors and coworkers provide the focus of the early meetings. The rest of the semester examines internship experiences and ethical or practice issues. A paper and presentation, assessing the relationship of the student's field experience to educational theory and research, are required. *Prerequisite: Permission of the instructor. Co-requisite: Enrollment in Education 529 or EDUC 592 or EDUC 593, or an equivalent educational field experience.* Two semester credit hours.

EDUC 585 Education Capstone Seminar

An intensive interdisciplinary seminar designed to provide upper-division Education Studies minors with the opportunity to reflect on and apply their diverse academic and practical experiences in education to a specific topic. Topics may change each year and could include the following: At-Risk Schools and Communities; Educational Diversity: An Historical Perspective; International Models of Education; The Challenges of STEM Education in the U.S.; Hunger and Learning; Teachers as Agents of Change. The seminar is discussion-based and includes opportunities for substantial reflection and research. Assignments include a culminating research project and service in the community and/or field experience in local schools. *Prerequisites: completion of EDUC 100, appropriate field experience, and permission of the instructor.*

EDUC 590 Independent Study

An independent study or research experience. The student independently pursues a topic or project of interest with guidance from a faculty member. Students meet one-on-one with the faculty mentor on a regular basis and also complete independent readings, laboratory work, or comparable activities. Credit: One to four semester credit hours. *Prerequisite: Permission of the instructor.*

EDUC 591 Group Study

English

Professors Bakken (Chair), Bulman, Caballero, Crowley, Ferrence, Hart, Hellwarth, Lo, David Miller, J. Miller, V. Prince, B. Slote, S. Slote, Votava

Allegheny's English Department offers a wide range of courses in literature and in creative and critical writing. Our program is informed by the goals and philosophies outlined in our mission statement:

English Department Mission Statement:

Allegheny's English Department offers a wide range of courses in literature and in creative and critical writing. The study of literature provides our students with a variety of interpretive methods and perspectives, increases their awareness of the range of creative expression, and introduces them to cultural values that deepen and challenge their own. Our writing-intensive classes seek to improve students' ability to express their own best ideas in many different forms. By mastering modes of analytical reading, critical explication, coherent argument, and creative thinking, students acquire those skills required to succeed in many professional fields. By studying a variety of literatures in English, they learn to recognize the ideas and perspectives that shape their own and earlier times; and by cultivating a sensitivity to the subtlety and power of language, they become educated in the fullest sense.

English Department Learning Outcomes

The guiding principle behind these learning goals is to create a clear path of student development in keeping with the spirit of the department's mission statement (above).

Overview of Course Levels

The English Department curriculum is tiered to emphasize different practices and skills within the discipline and to indicate to students a coherent progression in their course of study.

- Our introductory course, ENGL 110, emphasizes close reading and the study of at least three literary genres.
- FSENG 201 is required for all English majors. While ENGL 110 *introduces* critical methodologies to students, the FSENG 201 syllabus is *organized* around such methodologies, reflecting the course's deeper investigation of critical modes. FSENG 201 also contains a research component, which will prepare sophomore majors for their upper-level work as English majors.
- *Our 200-level studies courses* study literature in its historical context. ENGL 201–ENGL 204 courses should cover at least two historical periods of literary history (e.g. realism and modernism) and the connections between them. Our 200-level creative writing courses offer students an introduction to the art of reading and writing poetry, fiction, and nonfiction.
- *All 300-level courses* incorporate some secondary research and a consideration of literary criticism.
- *400-level literature courses* will be more rigorous than at the 300-level and will include theoretical approaches to literature. Our 400-level creative writing courses offer students more advanced instruction in the art of reading and writing poetry, fiction, and nonfiction.
- *Junior Seminars* build upon the skills introduced at the earlier levels and prepare students for completing the senior project. In addition to an extended term paper that exhibits a defined critical methodology, the junior seminar usually requires an annotated bibliography.

Learning Outcomes for ENGL 110

Students who successfully complete ENGL 110 will:

- Master basic terms of literary study;
- Utilize close reading as a primary skill of literary analysis;
- Encounter other interpretive methods that build upon the principle of close reading;
- Recognize the conventions of different genres;
- Develop interpretive arguments both in writing and discussion;
- Understand the significance of historically underrepresented perspectives and traditions.

Learning Outcomes for 200-level Studies Courses in English

Students who successfully complete 200-level Studies courses in English will:

- Describe literature in its historical contexts;
- Differentiate between at least two periods of literary history;
- Identify how literature and culture are interrelated;
- Continue to develop and refine skills as close readers of literary texts;
- Continue to develop interpretive arguments about literary texts.

Learning Outcomes for 200-level Creative Writing Workshops

Students who successfully complete creative writing workshops at the 200-level will:

- Examine and describe choices writers make to construct meaning and express human experiences;
- Identify the traditions, controversies, vocabulary, and conventions pertinent to the craft of poetry, fiction, or literary nonfiction;
- Demonstrate in their own poetry, fiction, or literary nonfiction an awareness of the relationship between form and subject matter;
- Revise their own poetry, fiction, or literary nonfiction by considering feedback;
- Provide constructive and informed feedback on peers' poetry, fiction, or literary nonfiction.

Learning Outcomes for 300-level Courses in English

Students who successfully complete 300-level courses in English (with the exception of ENGL 380 and ENGL 385) will:

- Continue to hone their skills as close readers of literary texts;
- Enhance their understanding of the relationship between text and context (literary, historical) begun in the 200-level *Studies* courses;
- Refine their ability to ask relevant, independent interpretive questions of literary texts;
- Encounter relevant examples of literary criticism and be able to summarize and respond to the argument of select articles.

Learning Outcomes for 400-level Courses in English

Students who successfully complete a 400-level literature course in English will:

1. Continue to hone their skills as close readers of literary texts;
2. Find and evaluate relevant published criticism;
3. Apply critical methods to a focused literary topic;
4. Complete a substantial research project that displays a sustained sense of historical and cultural context.

Learning Outcomes for the Junior Seminar in English

The Junior Seminar is required of all English majors and may be taken by minors to fulfill the 400-level requirement. These seminars place an emphasis on discussion, individual student research, and critical methodology. The subject matter of junior seminars varies according to individual instructors.

Learning Outcomes for the Senior Project in English

Every Allegheny student completes a Senior Project: a significant piece of original research or creative work, designed by the student under the guidance of a faculty advisor, that demonstrates the ability to complete a major assignment, to work independently, to analyze and synthesize information, and to write and to speak persuasively.

The English Major

English majors are required to have a GPA of at least 2.0 in English at graduation. All English courses taken at Allegheny on a letter-grade basis are included in the calculation, with the exception of repeated courses, for which only the most recent grade counts. At least 10 courses, including the Junior Seminar and Senior Project, must be taken on the letter-grade basis; additional courses may be taken Credit/No Credit, though the department recommends that the number of such courses be kept to a minimum.

A major in English leads to the degree of Bachelor of Arts. Two tracks are available within the major, the standard English major and one with an emphasis on creative writing.

English Major

The major in English requires 40-48 semester credit hours. Majors must take:

1. ENGL 110 *Reading Literature* (four credits). ENGL 110 is a prerequisite for all literature courses above the 200 level and for creative writing courses at all levels.
2. FSENG 201 *Communication in a Discipline: English* (four credits).
3. ENGL 201 *Studies in Early British Literature* (four credits)
4. **Two** of the following (eight credits):
 - ENGL 202 *Studies in Later British Literature*
 - ENGL 203 *Studies in American Literature*
 - ENGL 204 *Studies in African American Literature*
5. At least one English course at the 300-level
6. At least one English course at the 400-level
7. At least two courses in literature after 1800
8. At least one course (in addition to ENGL 201) in literature prior to 1800. Courses that satisfy the pre-1800 requirement include ENGL 212, ENGL 311, ENGL 385, ENGL 415, ENGL 425, ENGL 426, and ENGL 435. Other appropriate topics, courses or seminars may satisfy the requirement, subject to approval by the advisor and the department chair.
9. A Junior Seminar (ENGL 550–ENGL 556)
10. A Senior Project (ENGL 620)

English Major: Creative Writing Emphasis

Students majoring in English with a Creative Writing emphasis must take the standard requirements for the English major plus several additional courses (courses may double count when appropriate):

1. All of the standard requirements for the English major as indicated above
2. **Two** of the following:
 - ENGL 205 *Writing Fiction*
 - ENGL 206 *Writing Poetry*
 - ENGL 210 *Writing Nonfiction*
3. **Two** of the following:
 - ENGL 301 *Forms of Fiction*
 - ENGL 302 *Forms of Poetry*
 - ENGL 303 *Forms of Drama*
 - ENGL 305 *Forms of Nonfiction*
4. At least **one** of the following:
 - ENGL 400 *Advanced Fiction Writing Workshop*
 - ENGL 401 *Advanced Poetry Writing Workshop*
 - ENGL 403 *Advanced Nonfiction Writing Workshop*
5. ENGL 624 *Senior Project in Creative Writing*. (I.e., ENGL 624 should be taken in place of ENGL 620.) Students will seek approval for either an original creative project or a critical study of a significant aspect of craft, genre, prosody, poetics, etc. (to be identified in consultation with members of the English department).

The English Minor

All six courses (24 semester credit hours) presented for the minor must be taken on the letter-grade basis. Under exceptional circumstances, one course taken Credit/No Credit may be presented for the minor with permission of the chair of the department. Typically, this exception is made when a student has taken ENGL 110 CR/NC before declaring the English minor.

Requirements:

1. ENGL 110 *Reading Literature*
2. Any **two** of the 200-level studies courses:
 - ENGL 201 *Studies in Early British Literature*
 - ENGL 202 *Studies in Later British Literature*
 - ENGL 203 *Studies in American Literature*
 - ENGL 204 *Studies in African American Literature*
3. Three other electives in English, one of which must be at the 300-level or above, and another of which must be either a 400-level course (excluding ENGL 400, ENGL 401, ENGL 403) or a junior seminar.

The Writing Minor

The Department of English also offers a minor in Writing. All six courses (24 semester credit hours) presented for the minor must be taken on the letter-grade basis. Under exceptional circumstances, one course taken Credit/No Credit may be presented for the minor with permission of the chair of the department. Typically, this exception is made when a student has taken ENGL 110 CR/NC before declaring the English minor.

Note: Students who major in English cannot also minor in Writing.

Requirements:

1. ENGL 110 *Reading Literature*
2. Any **two** of the following courses:
 - ENGL 205 *Writing Fiction*
 - ENGL 206 *Writing Poetry*
 - ENGL 210 *Writing Nonfiction*
3. Any **one** of the following courses:
 - ENGL 400 *Advanced Fiction Writing Workshop*
 - ENGL 401 *Advanced Poetry Writing Workshop*
 - ENGL 403 *Advanced Nonfiction Writing Workshop*
4. Any two electives in English, one of which must be at the 300-level.

The Environmental Writing Minor

The Department of English also offers a minor in Environmental Writing that requires the successful completion of 28 semester credit hours.

Requirements:

1. ENGL 110 *Reading Literature*
2. ENGL 209 *Literature about the Environment*
3. ENGL 210 *Writing Nonfiction*
4. Either ENGL 205 *Writing Fiction* OR ENGL 206 *Writing Poetry*
5. Any **one** of the following courses:
 - ENGL 400 *Advanced Fiction Writing Workshop*
 - ENGL 401 *Advanced Poetry Writing Workshop*
 - ENGL 403 *Advanced Nonfiction Writing Workshop*
5. Two corequisite courses. Students minoring in Environmental Writing must also take at least two courses outside the English department that deepen their understanding of the natural environment or of environmental issues. These courses can be among those courses taken for a student's graduation major or for another minor (that is, they can be "double counted"). One course must come from the Environmental Science department, and we strongly recommend *ENVSC 110 Introduction to Environmental Science*. Other courses to choose from include the following:
 - ART 156 *Introduction to Studio Art: Art and the Environment*
 - Biology – any course
 - ECON 231 *Environmental Economics and Policy*

- Environmental Science – any course
- Geology – any course

Other courses with appropriate environmental focus may be used as corequisites, subject to the approval of the Chair of the English Department, in consultation with members of the other relevant department and the Environmental Writing Coordinator.

English Courses

ENGL 110 *Reading Literature*

A course in the close reading of literary texts. Through the study of a limited number of works of fiction, poetry, and drama, students develop their ability to read carefully and to understand the relations between literary texts and a range of historical and/or literary contexts. The course also introduces students to some of the terms, critical approaches, and research methodologies necessary for further literary study. Distribution Requirements: HE.

ENGL 201 *Studies in Early British Literature*

A course that will focus on British literary history written prior to 1800. Emphasis will be on the relations among literary works produced during the same historical period, on the interactions between literature and culture during a historical period, and on the changes and developments that establish the boundaries between one period in literary history and another. Sample topics: Self and Society in the Middle Ages, Early Modern Travel Narratives, From Renaissance to Restoration Comedy. Distribution Requirements: HE.

ENGL 202 *Studies in Later British Literature*

A course that will focus on British literary history after 1800. Emphasis will be on the relations among literary works produced during the same historical period, on the interactions between literature and culture during a historical period, and on the changes and developments that establish the boundaries between one period in literary history and another. Sample topics: From Romantic to Victorian Literature, From Victorian Literature to Modernism, British Literature of the Two World Wars. Distribution Requirements: HE.

ENGL 203 *Studies in American Literature*

A course that will focus on American literary history. Emphasis will be on the relations among literary works produced during the same historical period, on the interactions between literature and culture during a historical period, and on the changes and developments that establish the boundaries between one period in literary history and another. Sample topics: American Literature and War, Sentimentalism and Realism, The Puritan Tradition. Distribution Requirements: HE.

ENGL 204 *Studies in African American Literature*

An examination of African American literary history that emphasizes the relations among works produced during a specific historical period and the changes and developments that establish boundaries between periods in literary history. Comparisons to other diverse traditions in U.S. literature and relationships between African American literature and the dominant Euro-U.S. tradition may also be featured. Sample topics include: From Slave Narrative to Reconstruction and the Age of Reaction, From Jim Crow-era Literature to the Literature of the Civil Rights Movement, African American Women's Literature from the Harlem Renaissance to the Black Arts Movement, African American Literary Naturalism to Modernism. Distribution Requirements: HE, PD.

ENGL 205 *Writing Fiction*

Study of the craft of fiction through the critical examination of both professional and student work. Emphasis is on the creative process through the exploration of plot structure, language, voice, setting and characterization. *Prerequisite: ENGL 110.* Distribution Requirements: HE, ME.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 206 Writing Poetry

Study of the craft of poetry through the reading and writing of poems and through critical examination of both professional and student work. Emphasis is on the creative process through the exploration of form, language, and the poetic line. *Prerequisite: ENGL 110.* Distribution Requirements: HE, ME.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 209 Literature About the Environment

A comparative study of the environmental imagination as expressed in literature. Of primary concern are questions of style, narrative, and representation in light of larger social, ethical, and political concerns about the natural world. In contrast to environmental philosophy or policy, the emphasis in this course is on the form of expression as well as the ideas presented. Authors studied may include Ralph Waldo Emerson, Henry Thoreau, Annie Dillard, Aldo Leopold, and Janisse Ray. Required for all students who pursue the Environmental Writing Track. *Prerequisite: ENGL 110.* Distribution Requirements: CL, HE.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 210 Writing Nonfiction

A study of the craft of creative nonfiction through reading and writing of creative nonfiction and through critical examination of both professional and student work. Areas within creative nonfiction that may be considered include: the personal essay, environmental writing, travel writing, food writing, and memoir. Emphasis is on the creative process through the exploration of structure, language, narrative devices, and quality of observation. *Prerequisites: ENGL 110.* Distribution Requirements: HE, ME.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 211 Women and Literature

An introduction to literature by women and/or representing women's experience. This course also explores feminist approaches to literature and provides critical and historical perspective on the relationships between women and literature. Specific genres and time periods studied may vary. Authors considered may include Amelia Lanyer, Aphra Behn, Jane Austen, the Brontes, Emily Dickinson, Virginia Woolf and Toni Morrison. *Prerequisite: ENGL 110, or WGSS 100, or permission of the instructor.* Distribution Requirements: HE, PD.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 212 Shakespeare

A study of selected comedies, histories, and tragedies, with some emphasis on their cultural context and performance possibilities. *Prerequisite: ENGL 110.* Distribution Requirements: HE.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 301 Forms of Fiction

A course devoted to the close study of some form or forms of prose fiction. Specific topics vary and may include the following: The Short Story, Arthurian Romance, The Novel of Development, Realist Fiction. *Prerequisite: ENGL 110.* Distribution Requirements: HE.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 302 Forms of Poetry

A course devoted to the close study of some form or forms of poetry. Specific topics vary and may include the following: The Elegy, Forms of the Lyric, Meter and Verse Forms. *Prerequisite: ENGL 110.* Distribution Requirements: HE.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 303 *Forms of Drama*

A course devoted to the close study of some form or forms of drama. Specific topics vary and may include the following: Early English Theatre, Modern Drama, Medieval Drama, Forms of Tragedy. *Prerequisite: ENGL 110.* Distribution Requirements: HE.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 305 *Forms of Nonfiction*

A course devoted to the close study of some form or forms of literary nonfiction. Specific topics vary and may include the following: The Personal Essay, Travel Literature, Creative Nonfiction, Traditions of the Essay. *Prerequisite: ENGL 110.* Distribution Requirements: HE.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 311 *Chaucer*

A study of the poetry of Geoffrey Chaucer, including *The Canterbury Tales* and possibly including *Troilus and Criseyde* and shorter works. The course examines Chaucer's responses to the literary, social, and religious conventions of the 14th century. Recommended: ENGL 201. *Prerequisite: ENGL 110.* Distribution Requirements: HE.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 313 *Study in a Major Author*

A course devoted exclusively to the study of works by a single major British, American, or other Anglophone author. The focus of the course will vary with each offering; John Milton, William Faulkner, Toni Morrison, and Nadine Gordimer are representative of the kind of figure who might be selected for study. *Prerequisite: ENGL 110.* Distribution Requirements: HE.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 321 *Literatures of Diversity in North America*

A concentrated exploration of literary, cultural, and theoretical traditions in English or translation that exist alongside the dominant Euro-U.S. tradition. Literatures may include Asian American, Native American, Caribbean, Border, LGBTQ, Disability, and Working Class literatures. *Prerequisite: ENGL 110.* Distribution Requirements: IP, PD.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 322 *Advanced Studies in African American Literature*

A concentrated exploration of a particular period, genre, or theme in the African American literary tradition. Topics range from Slave Narrative to the Harlem Renaissance to Black Arts Poetry and Drama. *Prerequisite: ENGL 110 or permission of the instructor.* Distribution Requirements: HE, PD.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 323 *Global Literature*

An exploration of literature beyond England and the United States, much of it in translation. Of primary concern are questions of geography, politics, and history. We may focus on one particular region or country or employ a theme-based approach to compare several traditions. Topics may include the literature of exile, South African fiction, Eastern European poetry, Magical Realism, Caribbean literature, the problem of censorship, tradition and innovation in African drama, and contemporary Indian literature. *Prerequisite: ENGL 110.* Distribution Requirements: HE, IP.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 324 *Latino/a Literature*

A concentrated exploration of the literature in English of U.S. Latino/a writers and Latin American writers. Central concerns include the construction of Latino/a identity alongside questions of acculturation and assimilation, gender, race, family, and

national affiliations, language, and class. We may focus on writers who represent specific immigrant and second-generation experiences, or we may survey similarities and differences among writers who span several decades and traditions. *Prerequisite: ENGL 110.* Distribution Requirements: HE, PD.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 350 Children's Literature

A study of children's literature, with focus on its cultural and theoretical underpinnings. Among the concerns addressed may be the definitions of "childhood" and "adolescence" the genre helps construct or undermine; the impact children's literature can have on notions of gendered, ethnic, class, and national identity; the formal variations of archetypal tales; the genre's role in authors' careers. Specific topics may include fairy tales (their cultural history and contemporary transformations); multicultural children's literature; the contemporary young adult novel; and children's verse. *Prerequisite: ENGL 110 or permission of the instructor.* Distribution Requirements: HE, PD.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 371 Politics and Literature (also listed as POLSC 371)

A team-taught course that examines the intersection of *Politics and Literature* in a given situation. While the specific topic may change from year to year, the course seeks to transcend the disciplinary borders between Political Science and English by exploring the vital connections between "system" and "story" at a given historical moment. The course may be taken for credit in either Political Science or English. *Prerequisite: permission of the instructors.* Distribution Requirements: HE, PD.

ENGL 380 Literary Theory

An examination of 20th-century theories of literature and criticism organized around essays from the fields of literary criticism, critical theory, and cultural studies. Critical "schools" studied might include Structuralism, Post-Structuralism, Reader-Response Criticism, New Historicism, Marxist Criticism, and Feminist Criticism. *Prerequisites: ENGL 110 and at least three additional English courses, or permission of the instructor.* Distribution Requirements: HE, SB.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 385 Cultural History of the English Language

An inquiry into the nature of the English language, its origins and evolution with an emphasis on the social, political, and cultural dynamics involved in language change. *Prerequisite: ENGL 110.* Distribution Requirements: IP, PD.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 400 Advanced Fiction Writing Workshop

An advanced study of the craft of fiction through the reading and writing of short stories and/or novellas and novels. Attention focuses on the writing, re-writing and criticism of longer works. *Prerequisites: ENGL 110, ENGL 205, and permission of the instructor.* Distribution Requirements: HE, ME.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 401 Advanced Poetry Writing Workshop

An advanced study of the craft of poetry through writing, reading and responding to poems. Emphasis is on prosody, on developing voice and subject through an examination of poetic devices, and on creating thematic unity both in individual poems and in the group of poems each student is expected to produce by the semester's end. *Prerequisites: ENGL 110, ENGL 206, and permission of the instructor.* Distribution Requirements: HE, ME.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 403 Advanced Nonfiction Writing Workshop

An advanced, intensive writing workshop for students with a genuine interest in crafting prose. Emphasis is placed on the crucial elements of creative nonfiction—storytelling, description, dialogue, voice, reportage—as well as the opportunity to

do extended original work in essay An advanced, intensive writing workshop for students with a genuine interest in crafting prose. Emphasis is placed on the crucial elements of creative nonfiction—storytelling, description, dialogue, voice, reportage— as well as the opportunity to do extended original work in essay writing. Workshop sessions engage participants as both writers and critical readers. *Prerequisites: ENGL 110, ENGL 210, and permission of the instructor.* Distribution Requirements: HE, ME.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 415 *Topics in Literature of the Middle Ages*

A study of the literature of the Middle Ages as it shapes and responds to literary, social, and religious traditions. Topics vary from year to year and may include Arthurian romance, the literature of courtly love, religious and mystical literature, and medieval drama. *Prerequisites: ENGL 110 and one of ENGL 201–ENGL 204 (ENGL 201 recommended).* Distribution Requirements: HE, IP.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 425 *Topics in Renaissance Literature*

A study of literature in the context of a rapidly changing Renaissance society. Focus may be on an author (Spenser, Jonson, Milton), a school (Metaphysical poets, Jacobean dramatists), a genre (epic, love lyric, prose), or some larger topic such as literature as an instrument of political power. *Prerequisites: ENGL 110 and one of ENGL 201–ENGL 204.* Distribution Requirements: HE.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 426 *Topics in Shakespeare*

An exploration of particular questions raised by Shakespeare's works. Such questions may include Shakespeare's interpretation of history, the genre of the "problem" comedies, or the impact of feminist, psychoanalytic, and political criticism on the interpretation of the plays. *Prerequisites: ENGL 110 and one of ENGL 201–ENGL 204.* Distribution Requirements: HE.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 435 *Topics in Restoration and 18th-Century Literature*

An exploration of the literature of an age often praised as "The Enlightenment" but condemned as morally corrupt. Topics may include Restoration comedy (Congreve, Wycherley), Augustan satire (Pope, Swift), the revival of classicism (Johnson, Burke), the rise of the novel (Defoe, Richardson, Fielding), and the advent of print culture. *Prerequisites: ENGL 110 and one of ENGL 201–ENGL 204.* Distribution Requirements: HE.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 445 *Topics in Romanticism*

A study of the literature, context, and influence of British Romanticism. Topics studied may include the re-definition of the artist, comparative Romanticism, the importance of landscape, and the rise of the Gothic; authors studied may include Blake, Radcliffe, Wordsworth, Keats and Mary Shelley. *Prerequisites: ENGL 110 and one of ENGL 201–ENGL 204.* Distribution Requirements: HE.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 455 *Topics in Victorian Literature*

An exploration of a significant topic that characterizes the literature of Victorian Britain (1837-1901). The focus may be on a major theme such as power and gender, a figure such as that of the outcast, or a controversial debate such as that which occurred between science and religion. Authors discussed may include Tennyson, Christina Rossetti, Dickens, the Brontës and Hardy. *Prerequisites: ENGL 110 and one of ENGL 201–ENGL 204.* Distribution Requirements: HE.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 460 Topics in Postcolonial Literatures

A study of any of the literatures that emerge in postcolonial sites and that address issues of colonial literary, linguistic, and cultural legacies as well as the challenges of literary self-determination and re-invention. Examples might be the literature of India after 1948 or the literature of various African nations after 1960. Contemporary theories about the process of decolonization are also explored. *Prerequisites:* ENGL 110 and one of ENGL 201–ENGL 204. Distribution Requirements: IP, PD.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 465 Topics in 19th-Century American Literature

A study of American literature as it reflects and participates in a particular period of the 19th century. Topics vary from year to year and may include the American Gothic, American Romanticism, the Literature of Reconstruction and Post-Reconstruction, the Rise of Realism and Regional Fiction. *Prerequisites:* ENGL 110 and one of ENGL 201–ENGL 204. Distribution Requirements: HE.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 470 Topics in 20th-Century American Literature

A study of American literature as it reflects and participates in a particular period of the 20th century. Topics vary from year to year and may include Literary Naturalism, the Southern Renaissance, Confessional Poetry and Fiction of the Vietnam War era. *Prerequisites:* ENGL 110 and one of ENGL 201–ENGL 204. Distribution Requirements: HE.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 475 Topics in Modernism and Postmodernism

A study of the literature and culture of the modernist and/or postmodernist periods. Topics are likely to span a variety of genres and cultures and may venture into media other than literature, such as painting and film. Authors studied typically include Mann, Eliot, Yeats, Stein, Joyce, Woolf, Gide, Barth, and Pynchon. *Prerequisites:* ENGL 110 and one of ENGL 201–ENGL 204. Distribution Requirements: HE, IP.

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

Undergraduate Internships

ENGL 502 Internship in Professional Writing

An internship with a local non-profit organization designed to give students experience writing professional documents for a variety of audiences. Students write brochures, grant proposals, memoranda, instructions, and/or websites, depending on the particular needs of the organization. In the past, students have been placed at the Center for Family Services, the Mind/Body Wellness Center, and Women's Services; placement at other non-profits may be possible. Credit: Two or four semester hours.

ENGL 508 Internship in Teaching and Tutoring Writing

An internship designed to provide new writing consultants and students with an interest in teaching English with significant theoretical knowledge and practical experience in the fields of composition and rhetoric, writing center theory, and writing pedagogy. Students meet once a week for 75 minutes as a seminar group to discuss critical readings in relevant fields and spend three hours a week working as peer writing consultants for the Learning Commons. Students complete a series of written and oral assignments requiring the integration of theory and practice and produce a substantial final research project. *Prerequisites:* A grade of "B" or higher in FS 101 and FS 102, faculty recommendation, and approval of the Director of Writing.

ENGL 529 Internship: English

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

Advanced Courses

ENGL 550–ENGL 556 Junior Seminar in Literature

Individual research projects and frequent discussions in a small class setting. The seminar is required for English majors in the junior year. Majors may take more than one seminar, and seminars are open to non-majors with permission of instructor. *Prerequisites: ENGL 110 and one of ENGL 201-204.*

Note: ENGL 200 may be used in place of ENGL 110 in satisfying the prerequisite for the above course.

ENGL 590 Independent Study

An independent study or research experience. The student independently pursues a topic or project of interest with guidance from a faculty member. Students meet one-on-one with the faculty mentor on a regular basis and also complete independent readings, laboratory work, or comparable activities. Credit: One to four semester credit hours. *Prerequisite: Permission of the instructor.*

ENGL 620 Senior Project

A one-semester, independently researched project in literary studies written under the supervision of an English department faculty member.

ENGL 624 Senior Project in Creative Writing

A one-semester project in creative writing (poetry, fiction, or creative non-fiction), written under the supervision of an English department faculty member.

Sophomore Seminar

FSENG 201 Communication in a Discipline

*English**

An exploration of oral and written communication with a focus on communication within a specific academic field. Students investigate the conventions of communication in the discipline and the methods by which practitioners position their work within larger disciplinary contexts. *Prerequisite: FS 102.* The course must be taken on a letter grade basis.

*The topical material covered in this sophomore seminar varies from section to section and year to year. Some sections of this course may have additional prerequisites.

Environmental Science

Professors Wissinger (Chair), Bense, Bethurem, Bowden, Bradshaw-Wilson, Carbone, Choate, Davis, Eatmon, B. Haywood, Pallant, Shaffer, Waggett, Utz,

Environmental Science is the study of interrelationships between human activities and the environment. Environmental Science is an unusual academic discipline in that it requires scientific knowledge about the natural world as well as an understanding about ways in which humans interact with the natural world. We examine effects of human actions on the environment and the means by which policies, regulations, and decisions influence human actions. We also examine human behavioral, cultural, and sociological interactions that affect the environment. Thus, the department is truly interdisciplinary and exemplifies the liberal arts approach to education. Courses offered within the Department of Environmental Science integrate various disciplines and thus reflect the interdisciplinary nature of environmental concerns and problem-solving. Departmental courses examine ecological systems; interactions of human perceptions, ideas, and technologies; and social, political, economic, and technological methods to preserve environmental quality. Faculty in the department believe that environmental specialists in the natural sciences must have a broad understanding of the social aspects of environmental problems. Likewise, a professional whose expertise is in environmental policy, management, or communications must also have a strong understanding of the scientific basis of decision-making in those fields.

Two majors are offered in the department: Environmental Science and Environmental Studies. A set of core courses is required of all majors that together lay necessary foundations in the social sciences, natural sciences, and humanities while providing opportunities for interdisciplinary analysis of environmental issues. In addition to these core courses, students must complete courses in a defined concentration developed in consultation with a faculty member from the department.

In the *Environmental Science* major, core courses include biology, chemistry, geology and mathematics. Upper-level courses synthesize and integrate basic sciences and apply that knowledge to analysis and solutions of current environmental problems. Upper-level courses are rich in lab and field experiences. Environmental Science majors often pursue graduate studies and careers in field, laboratory or applied science settings. Students typically work and study at research institutions, regulatory agencies, or private consulting firms that highlight environmental quality. The Environmental Science major prepares students to work in terrestrial, marine, or aquatic arenas; land use assessment; agriculture; forestry; resource management; or pollution assessment and control.

In examining the concept of sustainability, *Environmental Studies* majors integrate environmental, economic, and social concerns and explore both desirable future conditions and transitions needed to reach them. The basic tenet of the Environmental Studies major is that progress toward a sustainable future depends on the creative application of interdisciplinary thinking that spans disciplines across the traditional college divisions while striving for both depth and breadth. We seek to inspire creativity and combine passion with critical thinking skills in students who one day will be the citizens working to convert the world to more sustainable systems.

For the purposes of fulfilling college-wide liberal studies requirements, both the Environmental Science and Environmental Studies majors are considered interdivisional. Because these majors are interdivisional, students may complete any minor or second major (with the exception of the other major in this department) to satisfy the college requirement that the major and minor be in different divisions.

The minimum GPA for a student to graduate with a major in Environmental Science or Environmental Studies is 2.0. All courses required for the Environmental Science and Environmental Studies majors (including Allegheny off-campus courses for which a letter grade is posted on the Allegheny transcript) are counted in the calculation whether they are Environmental Science courses or courses listed outside the department. Courses required by the major are expected to be taken on a letter-grade basis. Exceptions must be approved by an Environmental Science department advisor.

Students who matriculated before Fall, 2016: Some Environmental Science courses may be used to satisfy the college distribution requirements that apply to students who matriculated before Fall, 2016. Courses carrying Natural Science credit include: ENVSC 110, ENVSC 210, ENVSC 305, ENVSC 315, ENVSC 321, ENVSC 332, ENVSC 335, ENVSC 344, ENVSC 346, ENVSC 370 and ENVSC 415. Courses carrying Social Science credit include ENVSC 250, ENVSC 340, ENVSC 350, ENVSC 352,

ENVSC 360, ENVSC 380, ENVSC 425, ENVSC 427, and ENVSC 585. Internships may carry Natural Science or Social Science credit—see an Environmental Science faculty member for assistance.

Majors in the Department of Environmental Science

The department offers two majors, Environmental Science and Environmental Studies. A set of core courses (24 credits) for each major includes: ENVSC 110, ENVSC 210, FSENV 201, ENVSC 585, ENVSC 600, and ENVSC 610.

Career Planning

Both Environmental Science and Environmental Studies majors must develop areas of concentration related to their major areas of interest in conjunction with a major advisor. Examples of concentrations include, but are not limited to, Environmental Philosophy; Environmental History; Communications and the Environment; Ecological Economics; Environmental Law; Environmental Policy; International Sustainable Development; Culture and the Environment; Art and the Environment; Environmental Education; Community Development; Conservation Biology; Terrestrial Ecosystems; Aquatic Ecosystems; Landscape Ecology; Environmental Toxicology; Environmental Geology; and Environmental Chemistry. All students are advised to consult an Environmental Science Department faculty member early in their careers for course planning.

Environmental Science Learning Outcomes

Students who successfully complete a major in Environmental Science are expected to be able to:

- Demonstrate a general understanding of the breadth and interdisciplinary nature of environmental issues (ENVSC 110);
- Demonstrate a general understanding of the qualitative and quantitative research methods to gain empirical evidence bearing on evaluation of environmentally sustainable alternatives (ENVSC 210);
- Demonstrate depth of critical analysis and writing of environmental problems that span popular, “gray” and primary publications (FSENV 201);
- Demonstrate the ability to locate, interpret and apply published research and lessons from successful projects to a focused environmental solution with potential regional stakeholders (Junior Seminar);
- Design, conduct and present (orally and in writing) independent research that is consistent with the highest standards and practices of research in environmental science (Senior Project);
- Be well-prepared for meaningful careers and post-graduate education in fields related to environmental science and beyond;
- Articulate the interdisciplinary context of environmental issues;
- Identify and justify key stakeholders in humanities and social sciences that need to be a part of sustainable solutions;
- Formulate an action plan for sustainable alternatives that integrate science, humanist, and social perspectives.

The Environmental Science Major

Because this program is interdivisional, students who major in Environmental Science may complete any minor to satisfy the college requirement that the major and minor be in different divisions.

The Environmental Science major requires 64 credits as follows:

1. ENVSC 110 *Introduction to Environmental Science*
2. ENVSC 210 *Environmental Research Methods*
3. FSENV 201 *Environmental Problem Analysis*
4. Electives: select **one** course from this list (4 credits):
 - ENVSC 250 *Environmental Education*
 - ENVSC 340 *World Regional Geography*
 - ENVSC 350 *Ecological Economics*
 - ENVSC 352 *Environmental Justice*
 - ENVSC 380 *Climate and Energy Policy*
 - ENVSC 425 *Global Health Transitions*
 - HIST 318 *Environmental Thought in Europe*

- ENGL 209 *Literature About the Environment*
- ENVSC 360/RELST 360 *Religion and Ecology*
- 5. Math requirement: select **one** course from this list (4 credits):
 - MATH 157 *Calculus I for Social/Life Sciences*
 - MATH 158 *Calculus II for Social/Life Sciences*
 - MATH 160 *Calculus I*
 - MATH 170 *Calculus II*
- 6. Foundation courses: Select **five** courses from this list (20 credits):
 - BIO 220 *Organismal Physiology and Ecology*
 - BIO 221 *Genetics Development and Evolution*
 - FSBIO 201 *Investigative Approaches in Biology*
 - CHEM 110 *Principles of Chemistry I*
 - CHEM 112 *Principles of Chemistry II*
 - ENVSC 305 *Environmental Spatial Analysis*
 - GEO 108 *Environmental Geology* or GEO 110 *Physical Geology*
 - FSGEO 201 *Field Geology*
 - PHYS 101 *Fundamentals of Physics I*
 - PHYS 102 *Fundamentals of Physics II*
- 7. Advanced courses: select **three** courses from this list (12 credits):
 - BIO 310 *Microbiology*
 - BIO 330 *Population and Community Ecology*
 - BIO 332/ENVSC 332 *Forest Ecosystems and Management*
 - BIO 335/ENVSC 335 *Conservation Biology*
 - BIO 344/ ENVSC 344 *Stream Ecology*
 - BIO 346/ENVSC 346 *Wetlands*
 - BIO 360 *Plant Physiology*
 - BIO 370/ENVSC 370 *Insect Ecology and the Environment*
 - BIO 385 *Biostatistics*
 - BIO 580 *Junior Seminar*. The following Biology junior seminars are acceptable: Stream Ecology, Animal Behavior, Limnology, Environmental Microbiology.
 - CHEM 222 *Inorganic Chemistry*
 - CHEM 231 *Organic Chemistry I: Form and Function*
 - ENVSC 315 *Environmental Remote Sensing*
 - ENVSC 415 *Environmental Health*
 - GEO 310 *Process Geomorphology*
 - GEO 400 *Hydrogeology*
 - GEO 430 *Geochemistry*
- 8. ENVSC 585 *Junior Seminar: Sustainable Development* (4 credits)
- 9. Senior Project (8 credits): take ENVSC 600 and ENVSC 610

Theme: the five foundation and three advanced courses must revolve around a central theme. Courses must be selected in consultation with a faculty member in Environmental Science by the end of the sophomore year. For most students, this selection process will occur during enrollment in ENVSC 210. The department expects that students may change course selection during their tenure at Allegheny; the student's advisor must approve all schedule changes.

Environmental Studies Learning Outcomes

Students who successfully complete a major in Environmental Studies are expected to be able to:

- Demonstrate a general understanding of the breadth and interdisciplinary nature of environmental issues (ENVSC 110);
- Demonstrate a general understanding of the qualitative and quantitative research methods to gain empirical evidence bearing on evaluation of environmentally sustainable alternatives (ENVSC 210);

- Demonstrate depth of critical analysis and writing of environmental problems that span popular, “gray” and primary publications (FSENV 201);
- Demonstrate the ability to locate, interpret and apply published research and lessons from successful projects to a focused environmental solution with potential regional stakeholders (Junior Seminar);
- Design, conduct and present (orally and in writing) independent research that is consistent with the highest standards and practices of research in environmental science (Senior Project);
- Be well-prepared for meaningful careers and post-graduate education in fields related to environmental science and beyond;
- Articulate the interdisciplinary context of environmental issues;
- Identify and justify key stakeholders in the natural sciences that need to be a part of sustainable solutions.

The Environmental Studies Major

Because this program is interdivisional, students who major in Environmental Studies may complete any minor to satisfy the college requirement that the major and minor be in different divisions.

The Environmental Studies major requires 64 credits as follows:

1. ENVSC 110 *Introduction to Environmental Science*
2. ENVSC 210 *Environmental Research Methods*
3. FSENV 201 *Environmental Problem Analysis*
4. Natural Science electives: select **two** courses from this list (8 total credits):
 - BIO 045 *Biology of Algae*
 - BIO 078 *Biology of Behavior*
 - BIO 082 *Insects and Humans*
 - BIO 220 *Organismal Physiology and Ecology*
 - BIO 221 *Genetics Development and Evolution*
 - FSBIO 201 *Investigative Approaches in Biology*
 - BIO 332/ENVSC 332 *Forest Ecosystems and Management*
 - BIO 370/ENVSC 370 *Insect Ecology and the Environment*
 - CHEM 110 *Principles of Chemistry I*
 - CHEM 112 *Principles of Chemistry II*
 - GEO 108 *Environmental Geology* or GEO 110 *Physical Geology*
 - FSGEO 201 *Field Geology*
 - ENVSC 230 *Soil to Plate: World Food and Agriculture*
 - ENVSC 305 *Environmental Spatial Analysis*
 - MATH 110 *Elementary Mathematical Modeling*
 - MATH 157 *Calculus I for Social/Life Sciences* or MATH 160 *Calculus I*
 - MATH 158 *Calculus II for Social/Life Sciences* or MATH 170 *Calculus II*
 - PHYS 065 *Introduction to Physics*
 - PHYS 101 *Fundamentals of Physics I*
 - PHYS 102 *Fundamentals of Physics II*
5. Theme: select eight additional courses (32 total credits), including at least two courses from the list below. At least six of the eight courses must be advanced (300- or 400-level). These eight courses must be relevant to Environmental Studies and must revolve around a central theme. Courses may include those from the Environmental Science department or other departments or off-campus study. Courses must be selected in consultation with a faculty member in Environmental Science by the end of the sophomore year. For most students, this selection process will occur during enrollment in ENVSC 210. The department expects that students may change course selection during their tenure at Allegheny; the student’s advisor must approve all schedule changes.
 - ENVSC 250 *Environmental Education*
 - ENVSC 340 *World Regional Geography*
 - ENVSC 350 *Ecological Economics*
 - ENVSC 352 *Environmental Justice*

- ENVSC 380 *Climate and Energy Policy*
- 6. ENVSC 585 *Junior Seminar: Sustainable Development* (4 credits)
- 7. Senior Project (8 credits): take ENVSC 600 and ENVSC 610

Off-Campus Courses and Internships

The department encourages off-campus study and internship experiences for both Environmental Studies and Environmental Science majors. Courses taken at the Duke Marine Biological Laboratory, the Arava Institute in Israel, the School for Field Studies in Costa Rica, the Ecosystems Center in Woods Hole, or any other departmentally approved off-campus study location may substitute for some or all of the required courses for either major. In addition, internships may also be acceptable substitutes for these courses. Substitutions must be approved in advance by your Department of Environmental Science advisor.

Internships

The department offers credit-bearing internships with local organizations; these are described below under the course numbers ENVSC 518–ENVSC 528. Interested students should speak with the department's Internship Coordinator well in advance of the semester they plan to take part in an internship. Internships change from semester to semester and new ones may be available that are not yet listed in the *Bulletin*. An application is required prior to registering for an internship and students with insufficient coursework or low GPAs may be ineligible.

Off-Campus Study

Allegheny College is affiliated with several off-campus study programs that are relevant to either Environmental Science or Environmental Studies majors. Students interested in studying off-campus should speak with their advisors about the possibility of using off-campus courses in lieu of on-campus major requirements. Each program has different eligibility requirements. More complete descriptions of the off-campus programs and requirements may be obtained from the Environmental Science faculty or from the Director of International Education, but brief descriptions are provided below:

- **Arava Institute for Environmental Studies, Kibbutz Ketura, Israel**

A semester or year-long program in sustainable development and peace, in cooperation with students from the Middle East, North America, Europe, Africa, and Australia. Professor Pallant is the liaison. Students receive Allegheny grades.

- **School for Field Studies, Costa Rica**

A one-semester program in sustainable development in the tropics. Professor Pallant is the liaison. Students receive Allegheny grades.

- **Duke Marine Biological Lab, North Carolina and Bermuda**

A one-semester program in marine, coastal and oceanographic biology, chemistry, policy and environment. Professor Wissinger is the liaison. Students receive Allegheny grades.

- **Semester in Environmental Science, The Ecosystems Center, Woods Hole, Massachusetts**

A one-semester program in coastal and terrestrial ecology, environment, and ecosystem processes. Professor Bowden is the liaison. Students receive Allegheny grades.

Environmental Science Courses

ENVSC 110 *Introduction to Environmental Science*

An overview of the natural science and social science components of the human environment. Topics include: the ecosystem, energy, resource definitions and limitations, water supply, air pollution, sustainable design, environmental policy, environmental justice, solid and hazardous waste management, land use and conservation biology. Designed primarily for first-year students and sophomores. Emphasis is on the use of natural and social scientific knowledge in decision-making and problem-solving. Distribution Requirements*: SB, SP.

**This course counts as Natural Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

ENVSC 210 Environmental Research Methods

An examination of analytical research methods used to study the environment. Solving environmental problems requires expertise in conducting research and in understanding how research is performed. Students will participate in field- and laboratory-based research of environmental issues within natural science and social science. Fundamental research skills, including hypothesis definition, experimental design, data analysis and presentation, will be explored. Laboratory, one period. *Prerequisite: ENVSC 110.* Distribution Requirements*: CL, SP.

**This course counts as Natural Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

ENVSC 230 Soil to Plate: World Food and Agriculture

A critical interdisciplinary survey of food production around the world. All aspects of agriculture and food systems are explored: soil management and crop production, insect and pest management, energy and water requirements, food processing and preparation, food distribution and food justice, food politics and economics, culture, cooking, diet, and health. One laboratory per week. *Prerequisites: ENVSC 110 and permission of the instructor.* Limited to first-year students and sophomores. Distribution Requirements: CL, SB.

ENVSC 250 Environmental Education

An overview of the foundations of environmental education. Topics include ethical approaches to determining the value of nature, ecological implications of social values, and the role of education in preserving and transforming social values. Systems (holistic) thinking and the development of ecological literacy are considered as approaches to achieving internationally accepted goals of environmental education. Theoretical concepts are applied to program design, implementation, assessment, and evaluation. May include a service-learning component. *Prerequisite: ENVSC 110 is recommended but not required.* Distribution Requirements*: CL, SP.

**This course counts as Social Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

ENVSC 285 Quantitative Sustainability

A survey of environmental issues from a quantitative perspective in order to expose students to mathematical tools used in the environmental sciences. Students are asked to make recommendations on issues surrounding climate change, pollution, ecosystem health, land use, population growth, natural resource management, and other current environmental issues. In the process of investigating these topics, students develop a mathematical toolkit for carrying out a variety of calculations, understanding uncertainty, interpreting data, and developing mathematical models to describe economic, social, and environmental systems. *Prerequisite: ENVSC 110.* Distribution Requirements: QR, SP.

ENVSC 305 Environmental Spatial Analysis

An interdisciplinary examination of the theory and techniques used in the mapping and geographic analysis of environmental problems. Environmental research increasingly depends on the ability to gather, analyze, and present spatial and temporal data using geographic information systems (GIS). Students are introduced to the use of these technologies through the analysis of environmental case studies. Selected topics include: map interpretation, map projections and scale, land geographic analysis and modeling. The class includes a weekly three-hour laboratory. *Prerequisite: ENVSC 110 or permission of the instructor.* Distribution Requirements*: CL, QR.

This course may **not be counted as a laboratory course for the Natural Science distribution requirement for students who matriculated before Fall 2016.*

ENVSC 315 Environmental Remote Sensing

An interdisciplinary examination of the theory and techniques used in the advanced mapping and geographic analysis of environmental problems. Remote sensing technology provides new, fundamental information necessary for large-scale environmental monitoring and land-use planning. Students are introduced to the use of the technology through the analysis of environmental case studies. Selected topics include: aerial photograph and satellite image interpretation, sensor system characteristics and applications, and image processing techniques. The class includes a weekly three-hour laboratory. *Prerequisites: ENVSC 210 and permission of the instructor.* Distribution Requirements*: CL, QR.

This course may **not be counted as a laboratory course for the Natural Science distribution requirement for students who matriculated before Fall 2016.*

ENVSC 321 Ecosystems, Birds, and People

A survey of bird populations and health in North America, starting with a review of basic ornithology, the geographic distribution of species, and major migratory routes before following select bird species through the maze of threats facing global bird populations. Students discover how birds serve as biological indicators through which to explore environmental challenges at multiple scales. From energy production and urban development, to industrial agriculture and residential lawns, students investigate how global systems of commerce, culture, and ecological processes are intertwined with the lives of birds, and why that matters. No prior knowledge of birds is necessary. The class includes a laboratory component. ENVSC 110 is recommended but not required. Distribution Requirements*: SB, SP.

**This course counts as Natural Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

ENVSC 332 Forest Ecosystems and Management (also listed as BIO 332)

A study of forest ecosystems and threats to forests caused by human actions. The course examines fundamental ecological processes that control forest ecosystems and the importance of forests in regional and global environments. Impacts of global warming, forest harvesting, air pollution and improper management will be discussed. Management regimes that result in sustainable forest practices will also be explored. Regional forest issues, as well as national and international forest concerns, will be addressed. Laboratory exercises will examine topics in local forested environments. Laboratory, one period. *Prerequisite: ENVSC 110, ENVSC 210 or a lab-based course in the Natural Science division.* Distribution Requirements*: QR, SP.

**This course counts as Natural Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

ENVSC 335 Conservation Biology (also listed as BIO 335)

The study of biological diversity and the increasingly severe effects of human society on populations and communities of wild organisms. Emphasis on local and global patterns of diversity, causes and consequences of declines in diversity, and ways to work with natural or managed systems to maintain or restore diversity. The laboratory emphasizes learning local flora and fauna, investigating local conservation biology issues, and using tools and techniques of wildlife and natural resource management to understand and resolve conservation problems. Laboratory, one period. *Prerequisites: ENVSC 110; or BIO 220 and BIO 221 and FSBIO 201.* Distribution Requirements*: QR, SP.

This course counts as Natural Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.

ENVSC 340 World Regional Geography

An examination of the physical and human forces that shape governments, economies, and culture. Topics include geology, soils, climate, agriculture, industry, politics, religion, history, and the arts. We investigate how these factors shape human interactions with the environment and influence people's interactions with one another in various regions and countries. Distribution Requirements*: IP, PD.

**This course counts as Social Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

ENVSC 344 Stream Ecology (also listed as BIO 344)

Study of the physical and biological characteristics of stream ecosystems. The laboratory emphasizes field study of local aquatic habitats. One laboratory per week. *Prerequisites: ENVSC 110; or BIO 220 and BIO 221 and FSBIO 201.* Distribution Requirements*: QR, SP.

**This course counts as Natural Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

ENVSC 346 Wetlands (also listed as BIO 346)

A study of the ecology and hydrology of marshes, swamps, bogs and other transitional habitats between aquatic and terrestrial ecosystems. Emphasis is on "ecosystem services" (hydrologic filters, pollutant sinks, productivity, biodiversity), on the history of wetlands destruction, and on current regulation and management approaches. The laboratory emphasizes field methods for determination and delineation of wetlands based on soils, hydrology and vegetation. Lecture: Two periods. Lab/field: One period. *Prerequisites: ENVSC 110; or BIO 220 and BIO 221 and FSBIO 201.* Distribution Requirements*: QR, SP.

**This course counts as Natural Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

ENVSC 350 Ecological Economics

An examination of the ways in which human economic systems depend upon and impact natural systems. The course includes topics covered in the more traditional field of environmental economics, including cost-benefit analysis, incentive-based regulation of pollution, pollution taxes and tradeable permit schemes, and clean technology promotion. In addition, more fundamental issues emerging from the newer field of ecological economics are also explored, including trade and the environment, sustainable national income accounts, limits to economic growth and sustainable economic design. *Prerequisites: ENVSC 110 and permission of the instructor. Distribution Requirements*: SB.*

**This course counts as Social Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

ENVSC 352 Environmental Justice

An examination of environmental issues and their implications for social justice. Topics include the history of the environmental justice movement, current conceptions and definitions of environmental justice, and case study applications. We draw from contemporary and historical case studies such as e-waste, industrial pollution, public transit, war and sustainable development. Emphasis is placed on student-led discussions of roles that gender, race, ethnicity and class play in environmentalism and environmental controversies. Limited to juniors and seniors. *Distribution Requirements*: CL, PD.*

**This course counts as Social Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

ENVSC 360 Religion and Ecology (also listed as RELST 360)

An exploration of the intersection between religion and ecology, and how religion can both contribute to and help address environmental problems. Topics include religion's role in shaping human relationships with nature, ecological themes that cut across religions and worldviews, and issues of environmental justice as it relates to gender, race, and class. In considering how religious communities can address ecological problems, students take part in service learning projects in local congregations or environmental groups. *Prerequisite: ENVSC 110 or at least one course in Religious Studies (RELST). Distribution Requirements*: HE, IP.*

**This course counts as Social Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

ENVSC 370 Insect Ecology and the Environment (also listed as BIO 370)

A study of insects, including those that interfere with efforts to tame natural systems such as agriculture, horticulture, and forestry. We introduce insect biology, methodologies to control pest insects, and how these vary based upon the environment and human requirement. Lectures discuss conventional methods of pest control but delve more deeply into biological and cultural control methods, establishing an understanding of integrated pest management programs. Labs introduce pest and beneficial insects found in ecosystems throughout Pennsylvania. A strong foundation in insect ecology and population dynamics allows students to manage ecosystems to decrease pest numbers without increasing chemical input. *Prerequisite: BIO 220 or ENVSC 210 or permission of the instructor. Distribution Requirements*: QR, SP.*

**This course counts as Natural Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

ENVSC 380 Climate and Energy Policy

An examination of the international response to global climate change. Topics include climate science; climate impacts; mitigation; adaptation; energy infrastructure; renewable energy technology; and current local, national, and international policy developments. Emphasis is placed on the analysis of environmental, economic, political, and cultural drivers of and barriers to lowering greenhouse gas emissions around the world. *Prerequisite: ENVSC 110 or permission of the instructor. Distribution Requirements*: SB, SP.*

**This course counts as Social Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

ENVSC 385 Introduction to Sustainable Energy

An introduction to sustainable energy production and consumption. We survey a number of consumable energy resources and consider the tradeoffs between different modes of energy production. Our study begins by examining personal energy consumption due to transportation, heating and cooling, electricity consumption, and the production of goods, services, and food. We then discuss a number of energy production technologies and use our understanding to develop local, national, and global energy plans. A lab component provides an opportunity to construct and characterize sustainable energy systems and experiment with original forms of energy production. *Prerequisite: ENVSC 110.* Distribution Requirements: QR, SB.

ENVSC 415 Environmental Health

Investigation and analysis of current human health impacts related to environmental issues. Students study the ecological, physiological, and social underpinnings of case studies, evaluate causal and correlative associations using key epidemiological tools, design and assess control and mitigation efforts, and develop a response to a local or regional environmental health issue. Students also interpret and conduct risk assessments to prioritize various issues and to evaluate the severity of impacts on specific populations, examining how environmental issues often place disproportionate health burdens on disenfranchised communities and individuals. Includes a laboratory component. *Prerequisite: Junior/Senior standing or permission of instructor.* Distribution Requirements*: CL, SP.

**This course counts as Natural Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

ENVSC 425 Global Health Transitions

An exploration of the underlying causes and social connections of global health problems including: malnutrition, poor water quality, inadequate infrastructure, overpopulation, chronic diseases, and HIV/AIDS, as well as issues specific to women and children. Students investigate health disparities and their ramifications at the global scale and evaluate the efficacy of intervention strategies at the local, regional, and international levels. In particular, we explore how numerous developments (urbanization, industrialization, globalization, and demographic transition) affect health and healthcare delivery and are in turn affected by human health and natural resources. *Prerequisites: junior or senior standing and permission of the instructor.* Distribution Requirements*: CL, IP.

**This course counts as Social Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

ENVSC 427 Culture, Power, and the Environment

An interdisciplinary study of nature-society interactions, attentive to social, cultural, and biophysical contexts and power relations, from a geographic perspective. In this reading-intensive, discussion-based seminar course, students learn about ideas of "nature" from various perspectives. Drawing on national and international case studies, students investigate ecological politics and resistance, the human dimensions of natural resource management, sustainable livelihoods, and environmental social movements in relation to local and global processes. The aim is to have a deeper understanding of the relationship between environmental issues, socio-economic and political processes, conflicts about resource governance and control, and to see these through other people's eyes. *Prerequisite: ENVSC 110 or FSGHS 201 or permission of the instructor.* Distribution Requirements*: IP, PD.

**This course counts as Social Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

ENVSC 518–ENVSC 528 Internships

All credit-bearing internships offered through the Department of Environmental Science consist of three components: (1) constructive participation in the operation of the internship organization (typically six hours/week for a two-credit internship, 12 hours/week for four credits); (2) a reflective and analytical journal to be reviewed periodically by the Internship Coordinator; and (3) a project to be determined jointly by the student, supervisor, and faculty liaison. This project is chosen specifically to integrate hands-on problem-solving with classroom-based academic principles. Students are evaluated by their supervisor, the Internship Coordinator, and the faculty liaison. All internships are two to four credits unless noted otherwise in their description.

ENVSC 518 Internship in Environmental Regulation with Pennsylvania Department of Environmental Protection

Liaison: Internship Coordinator

An internship in research, analysis, policy development and implementation with the Northwest Regional Office of the Pennsylvania Department of Environmental Protection. The intern works in one of DEP's sections (Water Supply and Community Health, Air Quality Control, Waste Management, Water Management, Environmental Clean-Up, Oil and Gas, or Pollution Prevention and Compliance Assistance). Must be taken for four semester hours of credit. *Prerequisites: ENVSC 110 and permission of instructor.*

ENVSC 519 Internship in Watershed Management

Liaison: Internship Coordinator

An internship in advocacy relating to the French Creek watershed. The French Creek Valley Conservancy, Pennsylvania Environmental Council, and The Nature Conservancy all bring together conservationists, landowners, farmers, the business community, local government officials, and academic institutions in a collaborative effort to protect one of Pennsylvania's premier streams. Interns participate in research, environmental education, public relations, and office communications. Other locations must be approved by the internship coordinator. Credit: Two to four semester hours. *Prerequisites: ENVSC 110 and permission of the instructor.*

ENVSC 520 Internship in Wildlife Management

Liaison: Internship Coordinator

An internship in human/wildlife interactions via the management and conservation of animal species and habitats. Interns may work with the Tamarack Wildlife Rehabilitation Center, the Pennsylvania Game Commission, or the Erie National Wildlife Refuge. Other locations must be approved by the internship coordinator. The intern is involved in wildlife capture, assessment, evaluation, and treatment of disease or injury, maintenance, and habitat analysis. The intern participates in educational programs for the public and discussions with other wildlife-related groups. Credit: Two to four semester hours. *Prerequisites: ENVSC 110 or BIO 220 and permission of the instructor.*

ENVSC 521 Internship in Environmental Geology with Moody and Associates (also listed as GEO 521)

Liaisons: Internship Coordinator (Environmental Science); Professor O'Brien (Geology)

The internship involves participation in conducting hydrogeologic investigations and the preparation of groundwater-resource reports. *Prerequisites: A minor or major in Geology and completion of GEO 310 and GEO 400.* Credit: One to four semester hours.

ENVSC 522 Internship in Environmental Education (also listed as GEO 522)

Liaisons: Internship Coordinator (Environmental Science); Professor O'Brien (Geology)

An internship in environmental education working with children and/or adults at a local educational facility, such as the French Creek Outdoor Learning Center. This facility is a collaborative effort of the French Creek Project, three local school districts, the Crawford County Development Corporation, and Allegheny's College/Schools Collaborative; as a remediated Superfund site, the Outdoor Learning Center offers many unique opportunities for exploration and interpretation of local ecology and geology. The Center's mission is to promote one of Pennsylvania's premier streams while exploring the impacts of environmental cleanup and management. Interns at this or other environmental education sites participate in research, curriculum development, environmental education, public relations, and office communications. *Prerequisites: ENVSC 110 and approval of the supervisor at the internship site.* Credit: One to four semester hours.

ENVSC 523 Internship in Conservation Biology with Erie National Wildlife Refuge (also listed as BIO 523)

Liaisons: Internship Coordinator (Environmental Science); Professor Wissinger (Biology)

The intern becomes familiar with the operation of a National Wildlife Refuge and participates in a research project related to wildlife management and conservation biology. In order to be eligible, the student must develop a project proposal in consultation with the liaison and refuge manager. Projects normally involve field or interpretive projects that culminate in a project report, pamphlet, or brochure that is submitted to both the liaison and refuge manager. Credit: Two to four semester hours. *Prerequisite: BIO 220.*

ENVSC 524 Internship in Land and Water Conservation

Liaison: Internship Coordinator

An internship with land and water conservation with USDA Forest Services, USDA Rural Development, Crawford County Conservation District, or Natural Resources Conservation Service. The intern may participate in projects such as farm conservation planning, flood prevention and watershed control, conservation education, field assessments of streams, riparian zones, and agricultural areas. Other locations must be approved by the internship coordinator. Credit: Two to four semester hours. *Prerequisites: permission of the instructor and ENVSC 110 and one of BIO 332/ENVSC 332, BIO 344/ENVSC 344, or BIO 346/ENVSC 346.*

ENVSC 525 Internship with the Crawford County Planning Commission

Liaison: Internship Coordinator

The student may elect one of the following internship experiences provided he or she has the indicated prerequisites: 1) A specific research project or general work with the Planning Commissioner. The work of the internship requires approximately 10 hours per week. The project is evaluated jointly by the supervising faculty member(s) and the Planning Commissioner; research projects are evaluated through discussions involving the Planning Commissioner, and supervising faculty member(s) and the intern. *Prerequisite: Approval of the liaison and the Planning Commissioner; POLSC 341 or POLSC 345; and ECON 340 or ECON 360 or ECON 585 are recommended.* The student intern contracts for two to four semester hours. 2) A project which would involve the preparation of maps and/or reports related to land-use planning, evaluation of natural resources such as sand and gravel deposits, or delineation of areas subject to natural hazards such as flood plains. The liaison, in consultation with the Planning Commissioner, determines a grade based on the student's final report. *Prerequisite: The student must develop a project proposal which is acceptable to both the Planning Commissioner and the liaison.* The student intern contracts for two to four semester hours.

ENVSC 526 Internship in Sustainable Resource Development and Management

Liaison: Internship Coordinator

An internship in the maintenance, advocacy, and development of sustainable energy, agriculture, or forestry practices. Internship locations may be public or private sector, nonprofit and community cooperatives. Other locations must be approved by the internship coordinator. Credit: Two to four semester hours. *Prerequisites: permission of the instructor and ENVSC 110 and one of ENVSC 230, BIO 332/ENVSC 322, or ENVSC 380.*

ENVSC 527 Internship in Fisheries Biology with the Pennsylvania Fish Commission (also listed as BIO 527)

Liaisons: Internship Coordinator (Environmental Science); Professor Wissinger (Biology)

The intern becomes acquainted with the operation of a fish culture station and participates in a research project related to fisheries management. The internship is conducted in cooperation with the Linesville fish culture station near Pymatuning Lake. In order to be eligible, the student must develop a project proposal in consultation with the liaison and station superintendent. Projects normally involve a field or laboratory study, or a public relations project that culminates in a project report, pamphlet, or brochure that is submitted to both the liaison and refuge manager. Credit: Two to four semester hours. *Prerequisite: BIO 220.*

ENVSC 528 Internship in Industrial Ecology

Liaison: Internship Coordinator

An internship in industrial ecology with a local industry. Working with the plant engineer, the intern examines the regulatory framework the industry operates within, becomes familiar with the manufacturing processes for a particular industry, and investigates resource/waste minimization opportunities for the industry. Regular meetings with the supervisor, other employees, and environmental engineers from other area industries help develop the intern's understanding of how environmental regulations and opportunities are perceived by different industries and by individuals with different roles within a particular industry. Credit: Two to four semester hours. *Prerequisites: ENVSC 110 and permission of the instructor.*

ENVSC 529 Internship: Environmental Science

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

Junior Seminar

ENVSC 585 Junior Seminar: Sustainable Development

Seminar discussion on a selected interdisciplinary topic in environmental science in preparation for the development of senior research topics. Students analyze the literature, write a literature review, present a seminar, and submit a research proposal. *Prerequisite: Declared major in Environmental Science or Environmental Studies or permission of instructor. This course counts as Social Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

Independent Study

ENVSC 590 Independent Study

An independent study or research experience. The student independently pursues a topic or project of interest with guidance from a faculty member. Students meet one-on-one with the faculty mentor on a regular basis and also complete independent readings, laboratory work, or comparable activities. Credit: One to four semester credit hours. *Prerequisite: Permission of the instructor.*

Senior Project

ENVSC 600 Senior Project I

Senior research and seminar in Environmental Science. Students are evaluated on their proposal and presentation at the preliminary meeting and on progress made during the fall semester. *Prerequisite: ENVSC 585.* Credit: Four semester hours.

ENVSC 610 Senior Project II

Senior research and seminar in Environmental Science. Students are evaluated on their research effort, oral defense, and written senior thesis. Taken in the spring semester. *Prerequisite: ENVSC 600.* Credit: Four semester hours.

Sophomore Seminar

FSENV 201 Environmental Problem Analysis

An interdisciplinary analysis of modern controversial environmental issues. Students examine scientific, economic, cultural and political underpinnings of issues. Areas of study address environmental degradation, natural resource use and misuse, human-environmental interactions, and environmental justice. Written assignments and oral arguments and presentations are emphasized. Counts toward the major in Environmental Science or Environmental Studies. *Prerequisite: ENVSC 110.*

Experiential Learning

Allegheny College offers two courses in support of study away: EXL 300 is designed to help students prepare for and reflect on semester- or year-long off-campus study away experiences, and EXL 594 offers a shorter, intensive study away experience. In addition, a limited number of internships in the health professions are offered as experiential learning courses. More information about these and other off-campus opportunities is available at the Allegheny Gateway.

Experiential Learning: Learning Outcomes

Students who successfully complete an experiential learning experience will:

1. Gain first-hand knowledge of a different cultural perspective through immersion and active participation in the local (domestic or international) community;
2. Develop the ability to critically examine issues from various cultural perspectives;
3. Develop a heightened sense of global and local interconnections and interdependencies;
4. Increase awareness and gain insight into how culture shapes values, beliefs, and identity.

Experiential Learning Courses

EXL 300 Cross-Cultural Learning: Theory and Practice

Required of all students in Allegheny-sponsored off-campus programs. This course provides grounding in cross-cultural learning and communication, and guidelines for reflection on experiential learning. It provides a framework for students to explore the dimensions of their time off-campus— differences and similarities among people, lifestyles, learning styles, and even knowledge itself. Students must complete the predeparture orientation requirements (readings, assignments, paperwork submissions, etc.), on-site blogs, and re-entry assignments (final paper & poster session) upon return to Allegheny. The course is posted to their transcript the semester they return to campus. Credit: One semester hour. Distribution Requirements: IP, PD.

EXL 594 Experiential Learning Travel Seminars

A short-term intensive course usually offered between semesters or after spring semester. Travel Seminars typically include travel in the U.S. or abroad, and incorporate direct observation of or involvement in activities that complement or illustrate the subject matter. The seminars integrate students' experiential learning activities with theory and research in various fields. Students are exposed to diverse ideas, peoples, cultures, or ways of living and thinking. The courses are designed and taught by Allegheny faculty. Individual Experiential Learning Seminars are reviewed by the Study Away and Campus Internationalization Committee and approved by the Curriculum Committee. Credit: Two to four semester hours.

Internships

EXL 501 Internship: Physical Therapy

The intern will work with an allied health professional at the Meadville Medical Center or at a private practice in the Meadville region. In addition to weekly observation hours, requirements include a reflective journal that demonstrates an understanding of the field, and a case study of a patient that demonstrates understanding of the bio-psycho-social nature of health care. The student is evaluated by the supervising health care professional and by the supervising faculty member. *Prerequisite: Approval of the faculty and health care professional.* Credit: Two to four semester hours.

EXL 502 Internship: Occupational Therapy

The intern will work with an allied health professional at the Meadville Medical Center or at a private practice in the Meadville region. In addition to weekly observation hours, requirements include a reflective journal that demonstrates an understanding of the field, and a case study of a patient that demonstrates understanding of the bio-psycho-social nature of health care. The student is evaluated by the supervising health care professional and by the supervising faculty member. *Prerequisite: Approval of the faculty and health care professional.* Credit: Two to four semester hours.

Experiential Learning

EXL 503 Internship: Physician Assistant

The intern will work with an allied health professional at the Meadville Medical Center or at a private practice in the Meadville region. In addition to weekly observation hours, requirements include a reflective journal that demonstrates an understanding of the field, and a case study of a patient that demonstrates understanding of the bio-psycho-social nature of health care. The student is evaluated by the supervising health care professional and by the supervising faculty member.

Prerequisite: Approval of the faculty and health care professional. Credit: Two to four semester hours.

EXL 504 Internship in Nursing

The intern will work with an allied health professional at the Meadville Medical Center or at a private practice in the Meadville region. In addition to weekly observation hours, requirements include a reflective journal that demonstrates an understanding of the field, and a case study of a patient that demonstrates understanding of the bio-psycho-social nature of health care. The student is evaluated by the supervising health care professional and by the supervising faculty member.

Prerequisite: Approval of the faculty and health care professional. Credit: Two to four semester hours.

EXL 529 Internship: Experiential Learning

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

First-Year/Sophomore Seminars

The First-Year/Sophomore program encourages careful listening and reading, thoughtful speaking and writing, and reflective academic planning and self-exploration. These courses provide students opportunities to develop communication and research skills useful for generating, exploring, defending, and challenging ideas, thereby preparing students to succeed in the Junior Seminar and Senior Project that are required for each student's major. Taken together, the FS program, Junior Seminar, and Senior Project ensure that all Allegheny graduates are equipped to think critically and creatively, to communicate clearly and persuasively, to listen and respond thoughtfully, and to meet challenges in a diverse, interconnected world.

FS Learning Outcomes

FS Program Learning Outcomes

Students who successfully complete the three-course FS sequence should:

- Become able readers, listeners, speakers, and writers acting in a variety of genres, occasions, and purposes;
- Develop an awareness of audience and its effects on the creation and delivery of ideas;
- Be able to use the ideas of others to advance thinking;
- Understand reading and listening as acts of inquiry.

Learning Outcomes for FS 101

Students who successfully complete FS 101 should:

- Recognize and express interesting ideas of intellectual value;
- Develop an engaging voice as a speaker and writer;
- Be able to organize ideas effectively to communicate in specific contexts;
- Be able to use language clearly, powerfully, and with appropriate detail.

Learning Outcomes for FS 102

Students who successfully complete FS 102 should be able to:

- Participate in a sustained conversation with other academic writers and speakers;
- Generate a thesis that addresses a clearly defined problem;
- Support a thesis with appropriate reading and evidence;
- Communicate in progressively complex and nuanced ways.

Learning Outcomes for FS 201

Students who successfully complete FS 201 should be able to:

- Produce persuasive written and oral presentations that advance disciplinary ideas and conform to disciplinary conventions;
- Articulate or demonstrate how the work of practitioners in the discipline draws on and responds to the work of other practitioners;
- Incorporate the work of others in substantial writing assignments and presentations in discipline-appropriate ways;
- Design, utilize and/or document academic research appropriate to disciplinary conventions.

FS Courses

Note: FS courses do not count towards the College Distribution Requirements for any student.

FS 101 Academic Discourse I

An exploration of oral and written communication with a focus on description and summary. The topical material covered in the seminar varies from section to section and year to year. All first-year students take Academic Discourse I during the

First-Year/Sophomore (FS) Seminars

fall semester; the seminar instructor serves as the student's first academic advisor. As part of the advising process, students explore both individual interests and possible academic paths. The course must be taken on a letter-grade basis.

FS 102 Academic Discourse II

Continued study of oral and written communication with an emphasis on argument. Students consider context, audience, style, evidence, and strategies for persuasion. The topical material covered in the seminar varies from section to section. The course must be taken on a letter-grade basis.

FS 201 Communication in a Discipline

Please see departmental course listings for descriptions of specific FS 201 courses offered by various programs. Students may receive credit for more than one sophomore seminar provided the courses are taken in different programs. FS 201 must be taken on a letter-grade basis.

FS 529 Internship: F/S Program

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

French

Professors Lewis, Reeck, P. Wolfe

Allegheny College offers a major and minor in French and instruction in the French language through the department of Modern and Classical Languages. For Allegheny's Learning Outcomes for the study of modern languages, including French, please see the "Modern and Classical Languages" section in this *Bulletin*.

See also the minor in "French Studies."

Study Abroad

Juniors are encouraged to study in a French-speaking country. The College sponsors several distinct study-abroad programs that are open to all qualified Allegheny students and to which Allegheny financial aid may be applied; see the "Study Away" section of this *Bulletin* for details. Most students of French choose to study in the Allegheny-sponsored programs in Angers (semester or year-long exchange program with the Université Catholique de l'Ouest) or Paris (the Boston University semester internship program). Coursework taken abroad may be applicable to the French major or minor; consult the department for details.

The French Major

French majors are required to have a GPA of at least 2.0 in French at graduation. Only French courses taken at Allegheny or the Boston University program in Paris on a letter-grade basis are included in the GPA calculation; for repeated courses, only most recent grade is included. Only French 600 may be taken on a Credit/No Credit basis. Courses taken in an approved program abroad may count for the major and minor.

A major in French leads to the Degree of Bachelor of Arts through the completion of a minimum of 42 semester credit hours in French, including:

- FSMLG 201 *Academic Communication in Languages, Literatures, and Cultures* (see the "Modern and Classical Languages" section for course description). Double majors meeting their FS201 requirement through another major should consult with their German major advisor.
- FRNCH 225 *Exploring Genre: Poems, Prose, Plays*
- FRNCH 301 *Contemporary French Society and Culture*
- FRNCH 305 *Advanced Composition and Conversation*
- **One** of the following survey courses (must be taken at Allegheny College):
- FRNCH 310 *From Romance to Revolution*
- FRNCH 320 *Romanticism, Realism, and Modernism*
- FRNCH 330 *"The Empire Writes Back"*
- **One** of the following topics courses (must be taken at Allegheny College):
- FRNCH 350 *Comedy and Tragedy*
- FRNCH 360 *Stories and Storytelling*
- FRNCH 370 *Writing and Society*
- An additional course in French numbered 300 or above.
- The Junior Seminar (FRNCH 580)
- The Senior Project (FRNCH 600 and FRNCH 610)

French majors who spend one semester abroad may complete up to 16 credits toward the major abroad, including not more than one 300-level literature and culture course. For those majors who spend a year abroad, please consult with the French Section Head. Students planning to study in France are encouraged (but not required) to take FRNCH 301 before departure.

Depending on initial placement, students may also need to take FRNCH 110, FRNCH 120, and/or FRNCH 215 to complete the major.

The French Minor

Requires a minimum of 20 semester credit hours in FRNCH, including FRNCH 225, FRNCH 301, and FRNCH 305. See also the minor in “French Studies.”

French Courses

FRNCH 110 *Beginning French I*

A course stressing the spoken language, basic structural patterns, reading for comprehension, and introduction to French and Francophone cultures. Three class meetings; one oral practice period a week. Distribution Requirements: IP.

FRNCH 120 *Beginning French II*

A course stressing the spoken language, basic structural patterns, reading for comprehension, and introduction to French and Francophone cultures. Three class meetings; one oral practice period a week. *Prerequisite: FRNCH 110 or appropriate score on placement test.* Distribution Requirements: IP, ME.

FRNCH 215 *Intermediate French*

A review of basic structural patterns to improve reading, writing, and speaking skills in French. One additional oral practice session per week and attendance at French Table. *Prerequisite: FRNCH 120 or appropriate score on placement test.* Distribution Requirements: IP, ME.

FRNCH 225 *Exploring Genre: Poems, Prose, Plays*

An introduction to French and Francophone literature designed to serve as a transition from language courses to more advanced courses. Study of texts from each genre presents students with a vocabulary and method with which to analyze texts. Particular attention is given to close readings, reading comprehension, and writing about literature. *Prerequisite: FRNCH 215 or permission of instructor.* Distribution Requirements: HE, IP.

FRNCH 301 *Contemporary French Society and Culture*

An introduction to contemporary French culture and an overview of the Francophone world. Topics relating to French institutions and cultural identity are analyzed and discussed. These may include political, economic, and educational institutions and values as well as media, the workplace, and family life. Readings, films, and television news programs are chosen to increase understanding of French and Francophone societies today. Assignments include oral presentations, papers, and written and oral exams. Recommended for students planning to study in France. One additional oral practice session per week and attendance at French Table are required. *Prerequisite: French 215 or permission of the instructor.* Distribution Requirements: CL, IP.

FRNCH 305 *Advanced Composition and Conversation*

A grammatical, phonetic, and structural study of the French language in its written and spoken forms. Written assignments focus on portrait, description, indirect and direct discourse, and narrative point of view. Discussion and debate explore a variety of subjects in conjunction with readings of literary texts and periodicals. Attendance at French Table is required. This is a required course for students who will continue with literature and culture courses. *Prerequisite: French 225 or permission of the instructor.* Distribution Requirements: IP, ME.

FRNCH 310 *From Romance to Revolution*

A brief introduction to French literature of the Middle Ages and Renaissance, followed by a concentrated examination of French literary and artistic masterpieces of the 17th and 18th centuries. Representative texts including classical theater as well as works of the *moralistes* and the *philosophes* are examined within their historical context. Emphasis is placed on the representations of royal power, social convention, and challenges to state authority. *Prerequisite: FRNCH 305 or permission of the instructor.* Distribution Requirements: HE, IP.

FRNCH 320 *Romanticism, Realism, and Modernism*

An examination of the upheavals and reversals of the 19th and 20th centuries in France through an analysis of literary movements such as romanticism, realism, existentialism, and the Theater of the Absurd. The course focuses on cultural

issues including the relationship of the individual to society, social and political revolution, and the role of the artist. *Prerequisite: FRNCH 225 or permission of instructor.* Distribution Requirements: HE, IP.

FRNCH 330 "The Empire Writes Back"

An introduction to the literature written in French from France's former colonies and its social-historical context. Topics include: the era of African Independences, la négritude, the Algerian War for Independence, and postcolonial immigration and writing in France. Emphasis is placed on the subversive nature of the literature studied and on how it inflects the French language, the French canon, and "Frenchness" itself. Articles from the press, essays, novels, and films are used. *Prerequisite: FRNCH 305 or permission of the instructor.* Distribution Requirements: HE, PD.

FRNCH 350 Comedy and Tragedy

A study of comic and tragic perspectives in French and/or Francophone drama, poetry, narrative fiction, and prose. The periods studied may vary as well as the topics discussed, which might include: the evolution of farce, the development of comic prose, the individual's response to personal or cultural dilemmas, the rise of the French tragic theater, and the use and adaptation of myths. Students may be required to attend screenings of performances or adaptations of texts under study. *Prerequisite: FRNCH 305 or permission of the instructor.* Distribution Requirements: HE, IP.

FRNCH 360 Stories and Storytelling

An exploration of French and/or Francophone narrative in prose and/or film. The texts, movements, and periods studied may vary; topics discussed may include: narrative styles and techniques in fiction and film, the history and evolution of these styles and techniques, the problems and possibilities of adaptation, oral traditions, and the importance of stories to storytellers and audiences. Students may be required to attend several film screenings outside of class. *Prerequisite: FRNCH 305 or permission of the instructor.* Distribution Requirements: HE, IP.

FRNCH 370 Writing and Society

An examination of significant literary texts written at important historical moments in the evolution of French and/or Francophone societies. Emphasis is placed on the role of literature in the development of intellectual history. Close reading and analysis focus on ways in which literature both reflects and influences the history of ideas. Topics vary from year to year and may include: *l'écrivain engagé*, political and historical essay-writing, and literature and war. *Prerequisite: FRNCH 305 or permission of the instructor.* Distribution Requirements: HE, IP.

FRNCH 529 Internship

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

FRNCH 580 Junior/Senior Seminar

Seminar, including oral reports, discussions, and an independent research paper. May be repeated for credit. *Prerequisite: FSMLG 201.*

FRNCH 590 Independent Study

FRNCH 592 Teaching in the Elementary or Secondary Schools

A field experience in education during which students work with teachers and students in elementary or secondary schools. Relevant readings, as well as discussions with the instructor and the supervising teacher, provide the background and context for the fieldwork. Students are required to keep a reflective journal and to complete a culminating project based on their experiences in the classroom. Offered on the Credit/No Credit basis only. Credit: Two to four semester credit hours. *Prerequisite: Permission of the instructor.*

FRNCH 600 Senior Project I

Preparation of a Senior Project proposal. A thesis statement, a short description of the project, and a bibliography have to be developed. Taken on a Credit/No Credit basis only. Credit: Two semester hours.

French

FRNCH 610 Senior Project II

Completion and oral defense of the Senior Project. *Prerequisite: FRNCH 600.*

French Studies

Professors Reeck (Program Coordinator), Carr, Gehring, Lewis, Shapiro, P. Wolfe

An interdivisional minor in the humanities and social sciences exploring the political, social, intellectual, and artistic manifestations of French civilization and culture, with extension to the broader context of France in Europe and France in the postcolonial context. Courses can be drawn from the Art, History, Modern and Classical Languages, and Political Science departments. Two courses must be taken at or above the 300-level, and students must have at least a 2.0 GPA in the minor. The minor requires 24 semester credit hours, and at least 8 credits but not more than 12 credits of French coursework should be included in the 24-credit minimum. Those 8 credits in French must include FRNCH 301.

French Studies Learning Outcomes

A student who successfully completes a minor in French Studies will achieve:

- Advanced intermediate oral and written proficiency in French;
- Understanding of France in historical context;
- Understanding of how artistic and cultural movements have shaped France over time;
- Understanding of some of the contemporary social and political questions affecting France, Europe, and the Francophone world.

The French Studies Minor

Because this minor is interdivisional, students may complete any major to satisfy the College requirement that the major and minor be in different divisions. When appropriate, other courses – for example, courses taken during study abroad – may be substituted for any of the requirements. All substitutions must be approved by a minor coordinator, and students are strongly encouraged to discuss any potential course substitutions prior to enrolling in the course.

Requirements:

1. French Language requirement: take at least eight credits of French, including FRNCH 301 *Contemporary French Society and Culture*. (Note: students may need to take additional coursework in French to achieve the needed proficiency to take FRNCH 301, but no more than 12 credits in French language may be counted toward the French Studies minor).
2. Arts and Culture requirement. Take **two** of the following (at least one of these must be an art history course):
 - ART 215 *Medieval Art: Glorious Visions*
 - ART 241 *19th Century European Art: From Academy to Atelier*
 - ART 247 *20th Century Art: Images of the Avant-Garde*
 - FRNCH 225 *Exploring Genre: Poems, Prose, Plays*
 - FRNCH 310 *From Romance to Revolution*
 - FRNCH 320 *Romanticism, Realism, and Modernism*
 - FRNCH 330 *"The Empire Writes Back"*
 - FRNCH 350 *Comedy and Tragedy*
 - FRNCH 360 *Stories and Storytelling*
 - FRNCH 370 *Writing and Society*
3. Social and Political Contexts requirement. Take **two** of the following:
 - HIST 105 *Europe in the Age of Popes and Princes, 476-1648*
 - HIST 107 *Europe in the Age of Recovery and Reformation, 1400-1648*
 - HIST 109 *Europe in the Age of Modernization and Revolution: 1648-1914*
 - HIST 110 *Europe in the Age of Dictatorship and Democracy: 1914-Present*
 - HIST 119 *West African Civilization*
 - HIST 157 *History of Modern France, 1789-Present*
 - HIST 306 *Enlightenment and Absolutism*
 - HIST 308 *The French Revolution and Napoleon*
 - HIST 310 *Europe at the Turn of the Century: 1880-1917*
 - HIST 556 *The French Revolution*

French Studies

- POLSC 226 *Government and Politics of Western Europe*
- POLSC 329 *Islam, Migration and Race in Western Europe*
- POLSC 427 *The European Union*

French Studies Courses

FRNST 529 Internship: French Studies

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

Geology

Professors O'Brien (Chair), Birsic, Cole, Schwartz

Geology is the study of the Earth—the materials that make it up, the processes that shape it, the record of ancient and modern environments, and the history of the planet and its life forms since its origin. Like other sciences, geology is based upon observation and problem solving. Unlike most sciences, however, it is an outdoor science with the Earth as its laboratory. It is also an interdisciplinary science, utilizing principles of physics, chemistry, biology, and mathematics to unravel the mysteries of Earth and other planets. By studying geology, you develop an understanding of earth processes; an understanding of the interactions between the solid earth (lithosphere), the hydrosphere, the atmosphere, and the biosphere; you also learn to appreciate the place and role of humanity living on the Earth today as well as within the context of geologic time.

Geology has both theoretical and applied aspects. The study of geology provides the knowledge needed to answer fundamental questions about how our planet works. In addition, the knowledge of the Earth gained through geology serves humanity by helping to better understand the past, manage the present, and predict the future. As stresses due to increased population and resource development have increased rapidly in the past few decades, so has the recognized need for geologists with a special understanding of how the Earth operates. Environmental geology is the application of geologic principles and knowledge to a wide spectrum of topics defined by possible interactions between humanity and the physical Earth. Geologic principles have been applied to problems of the environment since the birth of geology. Some topics studied within environmental geology are water resources and contamination; river flooding; groundwater; coastal processes; impact of climate change; hazards such as landslides, earthquakes, and volcanoes; energy and mineral resources; and land use.

Major programs offered within the Department of Geology meet specific professional objectives as well as the broad objectives of a liberal arts college. The department offers three programs that are designed to meet different objectives: Bachelor of Science in Geology, the Bachelor of Science in Environmental Geology, and the Bachelor of Arts in Geology. The Bachelor of Science program in Geology is designed to prepare students for graduate study in all aspects of geology or for employment as professional geologists. The Bachelor of Science in Environmental Geology is designed to prepare the student for graduate study involving Earth-surface processes or for employment as an environmental geologist. The Bachelor of Arts program can be arranged to accommodate other objectives such as teaching earth science at the secondary level, preparing for graduate programs in law or business, or entry into a career field.

Geology Learning Outcomes

The mission of the Allegheny College Geology Department is to provide our students a high-quality education to meet societal and scientific needs connected to earth processes with core geoscience, critical-thinking, and communication skills.

Geology Major Learning Outcomes

Students who successfully complete a major in Geology are expected to:

- Demonstrate knowledge of: physical and chemical properties of the lithosphere and hydrosphere (minerals, rocks, soils, and water); geologic time and earth history; and crustal materials and dynamics in the context of plate tectonics theory;
- Demonstrate competence in fundamental geological skills including: mineral, rock, and soil identification; interpretation of topographic maps, geologic maps, and various forms of imagery; construction of geologic maps and cross sections; three-dimensional conceptualization; and collection of organized field and laboratory data;
- Demonstrate competence in quantitative data analysis including: the construction and reading of graphs; construction and use of spreadsheets; and application of mathematical skills (ranging from algebra to calculus) for analysis of geological systems;
- Make critical and independent inquiry in the geosciences including the ability to: gather and evaluate peer-reviewed literature; identify a research question; design and conduct a research plan to collect laboratory and/or field data; and interpret research results;
- Gain an understanding of the societal relevance of earth systems;

- Effectively communicate ideas, research results, and interpretations using written, oral, and graphical design skills on both a formal and an extemporaneous basis.

Geology Minor Learning Outcomes

Students who successfully complete a minor in Geology are expected to:

- Demonstrate knowledge of: the physical and chemical properties of the lithosphere and hydrosphere (minerals, rocks, soils, and water); geologic time and earth history; and crustal materials and dynamics in the context of plate tectonics theory;
- Demonstrate competence in fundamental geological skills and quantitative analysis including: mineral, rock, and soil identification; interpretation of topographic and geologic maps and cross-sections with basics of three-dimensional conceptualization; and the ability to collect and interpret field and laboratory observations;
- Effectively communicate knowledge and interpretations using written, oral, and graphical skills on both a formal and an extemporaneous basis;
- Gain an understanding of the societal relevance of earth systems.

Learning Outcomes for Students Completing Geology Courses

All students who successfully complete a course in the Department of Geology are expected to:

1. Demonstrate fundamental knowledge of: the physical and chemical properties of the lithosphere and hydrosphere (minerals, rocks, soils, and water); geologic time and earth history; and crustal materials and dynamics in the context of plate tectonics theory;
2. Demonstrate skills in: mineral, rock, and soil identification; interpretation of topographic and geologic maps; and interpreting and evaluating geological data, hypotheses, and ideas;
3. Gain an understanding of the societal relevance of earth systems;
4. Effectively communicate this knowledge and these skills using written and/or oral methods.

The Geology Major

At graduation, Geology majors are required to have a GPA of at least 2.0 in departmental courses and in those courses in other departments required for the Geology major. All required courses and electives taken at Allegheny on a letter-grade basis are included in the calculation, with the exception of repeated courses for which only the most recent grade counts. Majors need to secure the permission of the department chair to take required courses on a Credit/No Credit basis.

Bachelor of Science degree in Geology

Requirements:

1. GEO 108 *Environmental Geology* or GEO 110 *Physical Geology*
2. GEO 120 *Earth History and Evolution*
3. FSGEO 201 *Field Geology*
4. GEO 240 *Mineralogy*
5. GEO 250 *Petrology*
6. **Five** of the following six allied courses:
 - CHEM 110 *Principles of Chemistry 1* or CHEM 120 *Chemical Concepts 1*
 - CHEM 112 *Principles of Chemistry 2* or CHEM 122 *Chemical Concepts 2*
 - MATH 160 *Calculus I*
 - MATH 170 *Calculus 2*
 - PHYS 101 *Fundamentals of Physics I* or PHYS 110 *Core Concepts in Physics I*
 - PHYS 102 *Fundamentals of Physics II* or PHYS 120 *Core Concepts in Physics II*
7. GEO 400 *Hydrogeology*
8. GEO 410 *Sedimentology and Sedimentary Petrology*
9. GEO 420 *Structural Geology*
10. GEO 430 *Geochemistry*
11. GEO 580 *Junior Seminar*
12. The Senior Project: either GEO 600 and GEO 610, or GEO 620

Geology

The department recommends that, where possible, students elect additional science courses in support of the major such as: BIO 220, CMPSC 111, ENVSC 110, ENVSC 305, other 200–300 level Environmental Science courses, 300-level Geology courses, MATH 210, PHYS 129, or the sixth course not taken to fulfil item #6 above. A course in statistics such as BIO 385 or PSYCH 206 is also suggested.

Bachelor of Arts degree in Geology

Requirements:

1. GEO 108 *Environmental Geology* or GEO 110 *Physical Geology*
2. GEO 120 *Earth History and Evolution*
3. FSGEO 201 *Field Geology*
4. GEO 240 *Mineralogy*
5. GEO 250 *Petrology*
6. **One** of the following allied courses (four credit hours):
 - ART 156 *Introduction to Studio Art: Art and the Environment*
 - BIO 385 *Biostatistics*
 - ECON 231 *Environmental Economics and Policy*
 - ENGL 209 *Literature About the Environment*
 - ENVSC 250 *Environmental Education*
 - ENVSC 340 *World Regional Geography*
 - PHYS 129 *Fundamentals of Astronomy*
 - PSYCH 206 *Research Methods in Psychology*
 - POLSC 340 *Political Geography*
7. **Two** additional courses (eight credit hours) selected from:
 - the courses in item #6 above not already taken in fulfillment of that requirement
 - BIO 220 *Organismal Physiology and Ecology*
 - BIO 346/ENVSC 346 *Wetlands*
 - CHEM 110 *Principles of Chemistry 1* or CHEM 120 *Chemical Concepts 1*
 - CHEM 112 *Principles of Chemistry 2* or CHEM 122 *Chemical Concepts 2*
 - ENVSC 110 *Introduction to Environmental Science*
 - ENVSC 210 *Environmental Research Methods*
 - ENVSC 285 *Quantitative Sustainability*
 - ENVSC 305 *Environmental Spatial Analysis*
 - ENVSC 315 *Environmental Remote Sensing*
 - ENVSC 380 *Climate and Energy Policy*
 - MATH 160 *Calculus I*
 - MATH 170 *Calculus 2*
 - PHYS 101 *Fundamentals of Physics I* or PHYS 110 *Core Concepts in Physics I*
 - PHYS 102 *Fundamentals of Physics II* or PHYS 120 *Core Concepts in Physics II*
8. GEO 400 *Hydrogeology*
9. GEO 410 *Sedimentology and Sedimentary Petrology*
10. GEO 420 *Structural Geology*
11. GEO 430 *Geochemistry*
12. GEO 580 *Junior Seminar*
13. The Senior Project: either GEO 600 and GEO 610, or GEO 620

The department recommends that, where possible, students elect additional courses in support of the major such as Geology 300-level courses and courses listed under item #6 that are not already used towards the major.

The Environmental Geology Major

The Environmental Geology major leads to a Bachelor of Science degree. At graduation, Geology majors are required to have a GPA of at least 2.0 in departmental courses and in those courses in other departments required for a Geology major. All required courses and electives taken at Allegheny on a letter-grade basis are included in the calculation, with the

Geology

exception of repeated courses for which only the most recent grade counts. Majors need to secure the permission of the department chair to take required courses on a Credit/No Credit basis.

Requirements:

1. GEO 108 *Environmental Geology* or GEO 110 *Physical Geology*
2. GEO 120 *Earth History and Evolution*
3. FS GEO 201 *Field Geology*
4. GEO 240 *Mineralogy*
5. GEO 250 *Petrology*
6. **Three** of the following six allied courses:
 - CHEM 110 *Principles of Chemistry 1* or CHEM 120 *Chemical Concepts 1*
 - CHEM 112 *Principles of Chemistry 2* or CHEM 122 *Chemical Concepts 2*
 - MATH 160 *Calculus I*
 - MATH 170 *Calculus 2*
 - PHYS 101 *Fundamentals of Physics I* or PHYS 110 *Core Concepts in Physics I*
 - PHYS 102 *Fundamentals of Physics II* or PHYS 120 *Core Concepts in Physics II*
7. ENVSC 110 *Introduction to Environmental Science*
8. **One** of the following courses:
 - BIO 220 *Organismal Physiology and Ecology*
 - BIO 346/ENVSC 346 *Wetlands*
 - ENVSC 210 *Environmental Research Methods*
 - ENVSC 285 *Quantitative Sustainability*
 - ENVSC 305 *Environmental Spatial Analysis*
 - ENVSC 315 *Environmental Remote Sensing*
 - ENVSC 380 *Climate and Energy Policy*
9. GEO 400 *Hydrogeology*
10. GEO 410 *Sedimentology and Sedimentary Petrology*
11. GEO 420 *Structural Geology*
12. GEO 430 *Geochemistry*
13. GEO 580 *Junior Seminar*
14. The Senior Project: either GEO 600 and GEO 610, or GEO 620

The department recommends that, where possible, students elect additional science courses in support of the major such as: CMPSC 111, MATH 210, PHYS 129, 300-level courses in Geology, ENVSC 305 if not already taken to fulfil item #8, and courses in item #6 not already taken in fulfillment of that requirement. A course in statistics such as BIO 385 or PSYCH 206 is also suggested.

The Geology Minor

Requirements:

1. GEO 108 *Environmental Geology* or GEO 110 *Physical Geology*
2. GEO 120 *Earth History and Evolution*
3. **Three** of the following courses:
 - BIO 331/GEO 331 *Paleobiology*
 - FS GEO 201 *Field Geology*
 - GEO 250 *Petrology*
 - GEO 310 *Process Geomorphology*
 - GEO 400 *Hydrogeology*
 - GEO 410 *Sedimentology and Sedimentary Petrology*
 - GEO 420 *Structural Geology*
 - GEO 430 *Geochemistry*

Two of GEO 240, GEO 301, GEO 302, GEO 303 or GEO 304 may be substituted for one of the three courses with permission of the department. Geology courses from the Duke Marine Program may substitute for some courses with consent of the department. Students are urged to consult the department chairperson in planning a minor program in Geology.

Off-Campus Study in Marine Geology

Students who are eligible (at least 3.0 GPA and approval of Director of International Education) can participate in our cooperative program with the Duke Marine Laboratory in Beaufort, North Carolina. Students receive Allegheny grades and credit for Geology major and minor requirements. Contact the Director of International Education in the Gateway for more information on this program.

Geology Courses

GEO 108 *Environmental Geology*

Application of geologic principles toward understanding Earth processes emphasizing interactions between humanity and the physical Earth. Designed as an introduction to geology, the course includes basic concepts of Earth materials (rocks and minerals), Earth structure, and surficial environments. Topics include water resources and contamination, land use planning, natural hazards such as earthquakes, volcanoes, landslides and floods, energy and economic resources, and environmental regulations and policies. Laboratory or field work, one period. *May not be taken after successful completion of GEO 110.* Distribution Requirements: CL, SP.

GEO 110 *Physical Geology*

The study of Earth properties and the dynamics of geologic systems to provide a basic understanding of the resources, environments, and evolution of our planet. The course considers Earth materials, interior structure of the planet, Earth surface processes, landform development, environmental geology, and physical evolution of the Earth. Specific topics include minerals and rocks, plate tectonics, ocean basins, continents, river and groundwater systems, glaciers, volcanism and earthquakes. Laboratory or field work, one period. *May not be taken after successful completion of GEO 108.* Distribution Requirements: QR, SP.

GEO 120 *Earth History and Evolution*

The study of Earth history and large-scale processes affecting our planet's evolution and present-day dynamics. Principles and techniques for system analysis are applied to the lithological, paleontological, and geochemical records to develop an understanding of atmosphere evolution, tectonic history, paleogeography, long-term environmental change, and biological evolution. Modern natural systems, laboratory projects involving rock suites and fossils, and models are used to demonstrate analytical approaches and aspects of Earth history. Laboratory one period. *Prerequisite: GEO 108 or GEO 110. Students who have taken FSGEO 201 prior to Fall 2006 may not take GEO 120.* Offered every Spring. Distribution Requirements: QR, SP.

GEO 240 *Mineralogy*

A study of the physical and chemical properties of Earth's minerals. Our study emphasizes mineral systems, the identification and classification of common rock forming and economically important minerals, and processes that influence mineral occurrence and composition. The fundamentals of crystallography, optical properties of minerals, and use of the polarizing microscope are included. Two credits, one laboratory period. *Prerequisite: GEO 108 or GEO 110.* Distribution Requirements: SP.

GEO 250 *Petrology*

A study of the origin and composition of Earth's crustal systems. Mineralogy, chemistry, and textures of rocks are learned through hand sample and microscopic analysis. Our study emphasizes interpretation of igneous, metamorphic, and sedimentary rock associations in relation to tectonic settings. Laboratory, one period. May include a multi-day field trip. *Prerequisites: GEO 108 or GEO 110, and GEO 240.* GEO 120 is strongly recommended. Offered in alternate years. Distribution Requirements: QR, SP.

GEO 301–GEO 304 Topics in Geology

Lectures and seminar-style discussions on selected topics in geology. Central themes vary on an alternate-year basis. Study includes textbook readings, critical analysis of research articles, indoor laboratory demonstrations, and a five to seven day field-laboratory experience at the conclusion of the course. The field trip provides an unusual opportunity to observe and exercise science introduced earlier in the course. The courses (GEO 301, GEO 302, GEO 303, and GEO 304) run for about one-half of the Spring Semester and are closed to students enrolled in GEO 580. *Prerequisites: GEO 108 or GEO 110, GEO 120 (concurrent registration is acceptable), and permission of the instructor.*

GEO 301 Coastal Processes and the Environment

An examination of geomorphology, sedimentology, and environmental problems of modern coastal zones with special emphasis upon physical processes of the environment. The crucial link between understanding modern process-response relationships and meaningful analysis of the rock record is demonstrated throughout the course. Field trip: Barrier Island coast of Georgia. *Prerequisites: GEO 108 or GEO 110, GEO 120 (concurrent registration is acceptable), and permission of the instructor.* Credit: Two semester hours. Distribution Requirements: QR, SP.

GEO 302 Foreland Tectonics and Sedimentation

A central theme is crustal dynamics of orogenic belts, focusing upon the interrelationship between tectonics and sedimentation in modern and ancient foreland settings. Evolution of the modern Taiwan orogenic belt-foreland basin couple at the Eurasian-Philippine plate boundary is used as insight to understanding paleodynamics of our own Appalachian system. Field trip: Virginia/West Virginia. *Prerequisites: GEO 108 or GEO 110, GEO 120 (concurrent registration is acceptable), and permission of the instructor.* Credit: Two semester hours. Distribution Requirements: QR, SP.

GEO 303 Ancient Depositional Environments and Present Environmental Geology

An examination of the dependency between ancient depositional systems and present environmental geologic concerns using the Appalachian Plateau (Kentucky region) as a case example. Initial focus is upon deltaic and carbonate sedimentary processes and their genetic link to tectonics, paleoclimate, and paleo-sea level. The distribution of resultant sedimentary strata is then linked to present landforms, environmental resources (coal, oil, and gas, groundwater), geohazards, engineering practices and land use. Field trip: Kentucky—ancient delta systems and karst terrain. *Prerequisites: GEO 108 or GEO 110, GEO 120 (concurrent registration is acceptable), and permission of the instructor.* Credit: Two semester hours. Distribution Requirements: QR, SP.

GEO 304 Modern and Ancient Geologic Processes in the White Mountains

An exploration of the relationship between geologic processes and the plate tectonics model as recorded in the rock record of north-central New Hampshire. Students examine: (1) evidence of sedimentation, metamorphism, deformation and magmatism in Paleozoic and Mesozoic rocks; and (2) how these rocks can be used to interpret the tectonic history of the region. Dominant geologic processes of the more recent Cenozoic Era (glaciation, rock/land slides, and acid rain neutralization) are also examined and discussed. Field trip: White Mountains, New Hampshire. *Prerequisites: GEO 108 or GEO 110, GEO 120 (concurrent registration is acceptable), and permission of the instructor.* Credit: Two semester hours. Distribution Requirements: QR, SP.

GEO 310 Process Geomorphology

A study of the surface of the Earth, processes that modify it, and principles governing their operation. Included in the course is the study of processes and landforms associated with weathering, streams, glaciers, coasts, and climatic change and groundwater. Laboratories emphasize field investigations, map and aerial photograph interpretation, and physical and computer models. Laboratory or field trip, one period. *Prerequisite: GEO 108 or GEO 110.* Distribution Requirements: QR, SP.

GEO 330 Climate Change: Past & Future

An examination of climate change on Earth at a variety of scales and the implications of global climate change (both past and future) from a scientific perspective. The course is divided into two seven-week units. The first unit focuses on evidence in the geologic record that provides a history of climate change on Earth over the last 2 billion years. The second unit focuses on the record of changing atmospheric gas concentrations (e.g. greenhouse gases) during the last 150 years and examines the methods that scientists use to predict and address future climate change. A day-long field trip may be involved. *Prerequisite: GEO 110 or GEO 108 or ENVSC 210.* Distribution Requirements: QR, SP.

GEO 331 Paleobiology (also listed as BIO 331)

A study of temporal and spatial changes of the Earth's fauna within the context of evolution and geological processes. Our study focuses on analysis and use of paleontological data in evolution, systematics, paleoecology, paleoclimatology, geology, and extinction. Laboratory: one period plus field trips. *Prerequisites:* BIO 220 and FSBIO 201, or GEO 120 and FSGEO 201. Distribution Requirements: QR, SP.

GEO 400 Hydrogeology

Principles of groundwater flow and physical properties of aquifers. The course combines both theoretical and applied approaches to the study of groundwater. Topics include: well construction and installation, characterization of subsurface hydraulic properties, groundwater flow, and contaminant transport processes. Course may involve a multi-day field trip. Laboratory, field work, or recitation, one period. *Prerequisite:* GEO 108 or GEO 110. MATH 160 is recommended. Offered in alternate years. Distribution Requirements: QR, SP.

GEO 410 Sedimentology and Sedimentary Petrology

Hydrodynamics of sediment movement, depositional products, and environmental systems as a basis for stratigraphic analysis. Also, detrital mineralogy and major sedimentary rock types in relation to basin type and tectonic setting. Laboratories include study of sedimentary structure sets from modern marine and variety of ancient environmental systems, some aspects of applied paleontology, petrographic analysis, and the field study of modern and ancient deposits. Laboratory, one period. *Prerequisites:* GEO 108 or GEO 110, GEO 120 or permission of the instructor. Offered in alternate years. Distribution Requirements: QR, SP.

GEO 420 Structural Geology

Rock deformation and tectonics of the Earth. Emphasizes geometric analysis and origin of secondary structures at microscopic-, outcrop-, and global-scales. Stress, strain, and material behavior are applied throughout the course. Topics include folding, fault systems, deformation mechanisms, kinematic analysis, interpretation of geologic maps and cross-sections, graphical and computer solutions of problems including the use of stereograms, and case studies of structural associations in mountain belts. Laboratory, one period. May include a multi-day field trip. *Prerequisites:* GEO 120 and FSGEO 201 (may be taken concurrently with GEO 120). Offered alternate years. Distribution Requirements: QR, SP.

GEO 430 Geochemistry

An examination of the chemical character and behavior of the near-surface environment. Students study analytical methods to characterize the chemistry of precipitation, surface/ground water, soils, and rocks. We examine the dominant chemical reactions between gas, liquid and solid phases on Earth and identify the products of these reactions. Course material is examined in the context of global geochemical cycling. Laboratory work, field work, or recitation, one period. CHEM 110 or CHEM 120, and GEO 250, are strongly recommended. Offered in alternate years. Distribution Requirements: QR, SP.

Internships

GEO 521 Internship: Environmental Geology with Moody and Associates (also listed as ENVSC 521)

Liaisons: Professor O'Brien (GEO 521); Environmental Science Internship Coordinator (ENVSC 251)

The experience involves participation in conducting hydrogeologic investigations and the preparation of groundwater-resource reports. The student must contract for credit. *Prerequisite:* Declaration of minor or a major in geology and completion of GEO 310 and GEO 400. Credit: One to four semester hours.

GEO 522 Internship: Environmental Education (also listed as ENVSC 522)

Liaisons: Professor O'Brien (GEO 522); Environmental Science Internship Coordinator (ENVSC 522)

An internship in environmental education working with children and/or adults at a local educational facility. Interns participate in research, curriculum development, environmental education, public relations and office communications. *Prerequisites:* ENVSC 110, GEO 110 or GEO 108, and approval of the supervisor at the internship site. Credit: One to four semester hours.

GEO 523 Internship: Conservation Biology

The intern becomes familiar with the operation of a National Wildlife Refuge and participates in a research project related to wildlife management and conservation biology. In order to be eligible, the student must develop a project proposal in consultation with the liaison and refuge manager. Projects will normally involve field or interpretive projects that culminate in a project report, pamphlet or brochure that is submitted to both the liaison and refuge manager. Credit: Two semester hours.

GEO 524 Internship: Meadville Area Water Authority (MAWA)

Liaison: Professor O'Brien

An internship with the local water authority to design and execute a project relating to water supply issues. Examples of potential projects include research on water consumption patterns on the campus or in the community; mapping of the water distribution system using a Geographic Information System (GIS); development of water conservation and education materials for adults and/or primary schoolchildren; creation of a web site for water customers; designing and implementing water conservation programs on the campus or in the community; economic analysis of water-supply operations. *Prerequisites: Approval from liaison.* Students who wish to work on technical aspects of ground water as a part of the internship must have completed GEO 400. Credit: One to four semester hours.

GEO 525 Environmental Consulting Internship: O'Brien and Gere, Inc.

Liaison: Professor O'Brien

An internship in hydrogeology and environmental remediation. Interns participate in the collection and analysis of field data to understand environmental conditions, such as ground water flow and contaminant transport, for reports and presentations to clients and regulatory agencies. Safety training, typically including 40-hour OSHA training, is part of the internship experience. Interns are expected to maintain a journal and to submit their journal and a final report on their experience to the liaison. The internship is typically taken during the summer in the Philadelphia, PA area; compensation for living expenses is provided. *Prerequisites: Declaration of major or minor in geology, and approval from liaison.* Completion of GEO 400 is strongly recommended. Credit: Two semester hours.

GEO 529 Internship: Geology

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

Junior Seminar

GEO 580 Junior Seminar

Seminar discussions on selected topics in geology in preparation for the development of senior research topics. Students analyze the literature, write a paper requiring literature review and synthesis, present a seminar, and submit a tentative research proposal for the Senior Project. Required of all junior majors in geology. Includes a five- to six-day field trip.

GEO 600–GEO 620 Senior Research Project

The student investigates a topic of current research interest. The topic and its scope are determined by the student in consultation with the faculty. In some cases, the research done for the senior project is in collaboration with the faculty supervisor and is part of that person's ongoing professional research. Careful research technique, critical evaluation of data, depth of specialized knowledge, independence and originality are cultivated as the project develops. A written thesis and oral defense before a board of geology faculty are required. The Senior Project may span only one semester (GEO 620), earning four semester credit hours, or two separate semesters (GEO 600 and GEO 610), totaling six semester hours of credit.

GEO 600 Senior Research Project I

The first semester of a two-semester research project. Students are evaluated on their proposals and presentations at the preliminary meeting, progress made during the semester, and presentation at the final meeting of the semester. Credit: Two or four semester hours. *Prerequisite: GEO 580.*

Geology

GEO 610 Senior Research Project II

The final semester of a two-semester research project. Students are evaluated on their continued research efforts, oral defenses and written theses. Credit: Two or four semester hours. *Prerequisite: GEO 600.*

GEO 620 Senior Research Project

Students are evaluated on their proposal and presentation at the beginning of the semester, research effort during the semester, and oral defense and written thesis at the end of the semester. The project must be completed during the semester of enrollment. *Prerequisite: GEO 580.*

Sophomore Seminar

FSGEO 201 Field Geology

Applied principles and field methods in geology and environmental geology. Students are exposed to critical analysis and communication in the geosciences through field and laboratory projects involving topographic maps, aerial photographs, geologic maps, rock and soil properties, subsurface drilling and geophysical data, and computer applications. Geologic mapping and hazards, landfill siting, environmental pollution, and oil exploration issues provide context for the projects. Field work or laboratory, one period. May include a multi-day field trip. *Prerequisite: GEO 108 or GEO 110.* May count toward a major or minor in Geology. Students who have taken GEO 230 prior to Fall 2006 may not take this section of FSGEO 201.

German

Professors Ensberg, Ludewig

Allegheny College offers a major and minor in German and instruction in the German language through the department of Modern and Classical Languages. For Allegheny's Learning Outcomes for the study of modern languages, including German, please see the "Modern and Classical Languages" section in this *Bulletin*.

Study Abroad

Students who have completed GERMN 120 and would like to pursue their study of German are encouraged to participate in the Allegheny in Cologne semester program. The program offers courses in German language, culture and literature, as well as courses in other areas such as art history, political science, history and German literature in translation. Students in their junior year who have taken two years of college German or the equivalent may participate in the Cologne Exchange Program. Students study directly at the University of Cologne and may choose from a wide variety of academic courses. Coursework taken abroad may be applicable to the German major or minor; please consult the department for more information.

International Economics and Business

Those students wishing to pursue a career in language with a focus on international economics or business should combine their study of a particular country and language with a background in economics. If students are majoring in German and minoring in economics, they should take GERMN 305, GERMN 310, GERMN 325, and GERMN 360 as part of their requirements. Students may also select a double major in these two disciplines. In addition, students are encouraged to study abroad and to complete an internship either abroad or with a company engaged in international trade. For economics courses that complement a German major or minor, see the course of study described under International Managerial Economics in the "Economics" section of this *Bulletin*.

The German Major

German majors are required to have a GPA of at least 2.0 in German at graduation. Only German courses taken at Allegheny and Cologne on a letter-grade basis are included in the GPA calculation; for repeated courses, only the most recent grade is included. Only GERMN 600 may be taken on a Credit/No Credit basis. Courses taken in an approved program abroad may count for the major and minor.

The major in German requires completion of a minimum of 42 semester credit hours. Students must take:

- FSMLG 201 *Academic Communication in Languages, Literatures, and Cultures* (see the "Modern and Classical Languages" section for course description). Double majors meeting their FS201 requirement through another major should consult with their German major advisor.
- GERMN 305 *Advanced German in a Cultural Context* or GERMN 310 *Advanced German in Literary Context*
- GERMN 325 *German Culture*
- Two more 300-level courses in German
- At least one 400-level course in German
- GERMN 580 *Junior/Senior Seminar*
- Senior Project: GERMN 600 and GERMN 610

The German Minor

A minor in German requires completion of 20 semester credit hours in German, including at least eight credit hours at the 300-level.

German Courses

GERMN 110 Beginning German I

A course stressing the spoken language, elements of grammar, reading for comprehension, and introduction to German culture. Three class meetings; two oral practice periods per week. Distribution Requirements: IP.

GERMN 120 Beginning German II

A course stressing the spoken language, elements of grammar, reading for comprehension, and introduction to German culture. Three class meetings; two oral practice periods per week. *Prerequisite: GERMN 110 or appropriate score on language placement test.* Distribution Requirements: IP, ME.

GERMN 210 Intermediate German I

A rigorous review of basic structural patterns and discussion of selected texts in literature and civilization, with an emphasis on writing and speaking to improve communication skills in German. *Prerequisite: GERMN 120 or appropriate score on placement test.* Distribution Requirements: IP, ME.

GERMN 220 Intermediate German II

Readings and discussions of selected texts in literature and civilization to improve communication skills and vocabulary. Selected, advanced grammar will be reviewed. *Prerequisite: GERMN 210 or appropriate score on placement test.* Distribution Requirements: IP, ME.

GERMN 235 German Language and Culture I: Intermediate

An intensive review of basic structural patterns to improve German language skills, emphasizing oral communication. To provide the study of language in a cultural context, this course utilizes authentic German texts and a variety of field trip opportunities. Credit: Four semester hours. (*Taught in Cologne, Germany.*)

GERMN 245 German Language and Culture II: Intermediate

An intensive review of basic structural patterns to improve German language skills, emphasizing oral communication. To provide the study of language in a cultural context, this course utilizes authentic German texts and a variety of field trip opportunities. Credit: Four semester hours. (*Taught in Cologne, Germany.*)

GERMN 255 German Language and Culture I: Advanced

An intensive study of advanced aspects of the German language, emphasizing oral communication. Various types of exercises and compositions, in addition to field trips and excursions, are used to practice the language within the context of the life and culture of Germany today. Credit: Four semester hours. (*Taught in Cologne, Germany.*)

GERMN 265 German Language and Culture II: Advanced

An intensive study of advanced aspects of the German language, emphasizing oral communication. Various types of exercises and compositions, in addition to field trips and excursions, are used to practice the language within the context of the life and culture of Germany today. Credit: Four semester hours. (*Taught in Cologne, Germany.*)

GERMN 285 German Short Fiction

An introduction to short literary texts in German by 20th-century authors and to the historical, political, and cultural background of the period. The course is designed to build vocabulary, increase reading skills and reinforce grammatical and communicative structures. Credit: Two semester hours. (*Taught in Cologne, Germany.*)

GERMN 305 Advanced German in a Cultural Context

An intensive review of all four language skills (listening, speaking, reading, writing) at the advanced level. Special emphasis is on selected grammar principles used in a contemporary cultural context. The course includes a variety of exercises with emphasis on composition. *Prerequisite: GERMN 220.* Distribution Requirements: HE, IP.

GERMN 310 Advanced German in Literary Context

A rigorous review of all four language skills on an advanced level and in a literary context. Based on individual needs, the course addresses selected grammatical and stylistic problems and concentrates on the writing of expository prose as well as on the discussion of literary texts. Distribution Requirements: HE, IP.

GERMN 325 German Culture

A comprehensive introduction to the historical, political, social, and intellectual background of German-speaking countries. Various types of compositions are used to practice language context. Special emphasis is placed on selected grammatical and linguistic concepts. May be repeated for credit. *Prerequisite: GERMN 220.* Distribution Requirements: HE, IP.

GERMN 345 Special Topics in German Literature and Culture

A use of literary and cultural texts to enrich cultural knowledge, to increase vocabulary, reinforce grammatical and communicative structures, and to introduce methods of textual analysis. Based on the theater and film program offered in Cologne, several plays and films are selected. (*Taught in Cologne, Germany.*)

GERMN 350 Topics in German Literature

An introduction to texts from a variety of genres and different time periods. The course is designed to familiarize students with fictional literature and its critical evaluation. Emphasis is on modern developments (since 1750). May be repeated for credit. *Prerequisite: GERMN 305.* Distribution Requirements: HE, IP.

GERMN 360 Topics in German Culture

An in-depth study of one area of German culture. Topics may include the position of women in society, the Holocaust, the connection of personal and national identity, the outsider in literature, the European Union. May be repeated for credit. *Prerequisite: GERMN 305.* Distribution Requirements: HE, IP.

GERMN 370 Creative Writing in German

A study of the craft of writing in German. Emphasis is on the creative use of German to develop vocabulary, improve individual style, and compose short prose texts. *Prerequisite: Permission of instructor.* Credit: Two semester hours. Course may be repeated for credit by majors. Distribution Requirements: IP, ME.

GERMN 440 Seminar in Literature

In-depth study and discussion of texts within a theoretical framework. Emphasis is on the cultural, political, and historical context. The course examines a number of selected issues in literary theory. Individual research projects may be presented. Course may be repeated for credit by majors. *Prerequisite: Permission of the instructor.* Distribution Requirements: HE, IP.

GERMN 529 Internship

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

GERMN 580 Junior/Senior Seminar

Seminar, including lectures, oral reports and discussion. May be repeated for credit.

GERMN 590 Independent Study

GERMN 592 Teaching in the Elementary or Secondary Schools

A field experience in education during which students work with teachers and students in elementary or secondary schools. Relevant readings, as well as discussions with the instructor and the supervising teacher, provide the background and context for the fieldwork. Students are required to keep a reflective journal and to complete a culminating project based on their experiences in the classroom. Offered on the Credit/No Credit basis only. Credit: Two to four semester credit hours. *Prerequisite: Permission of the instructor.*

GERMN 600 Senior Project I

Preparation of a Senior Project proposal. A thesis statement, a short description of the project and a bibliography have to be developed. Taken on a Credit/No Credit basis only. Credit: Two semester hours.

GERMN 610 Senior Project II

Completion and oral defense of the Senior Project. *Prerequisite: GERMN 600.*

Global Health Studies

Professors Waggett (Chair), Baskan, Christie-Searles, Coates, Conklin, Darrouzet-Nardi, Dawson, Farrelly-Jackson, Humphreys, Peterson, Pinnow, Shaw, and Silva

Global Health Studies is an interdivisional program that promotes a multidimensional understanding of local and global health issues, particularly in low-resource regions. It emphasizes the links between health and patterns of economic and social development, and it brings together courses on the environment, ethics, politics, economics, society, and culture. The major and minor aim to foster 1) an understanding of disease causation and prevention; 2) awareness of the transnational dimensions of health and disease; 3) comprehension of the relationship between health and the built and natural environments; 4) an ethical outlook that promotes sensitivity to the culture of local communities; 5) firsthand knowledge of real-life global health work; and 6) an appreciation of the political, historical, social, behavioral, scientific, and cultural aspects of health in the search for sustainable solutions.

Global Health Studies Learning Outcomes

Global Health Studies Major Learning Outcomes

Students who successfully complete a major in Global Health Studies are expected to be able to:

- Define the complex, interconnected approaches, policies, communities, and perspectives that impact the field of global health;
- Use a variety of frameworks and methods to define and engage with issues related to the field of global health;
- Understand and articulate the interrelated relationships between geographical and cultural spaces, populations, policies, and health;
- Understand disease causation and prevention and the relationship between health and the built and natural environments;
- Operate with a responsible and self-reflexive awareness of power, privilege, and ethics within a multiplicity of cultural contexts;
- Listen actively and communicate effectively with a wide range of audiences.

Global Health Studies Minor Learning Outcomes

Students who successfully complete a minor in Global Health Studies are expected to be able to:

- Demonstrate a basic understanding of the contexts, practices, and perspectives of Global Health Studies;
- Recognize cultural and contextual differences and their importance in defining and addressing issues relevant to the field of Global Health.

The Global Health Studies Major

The major leads to the Bachelor of Arts or the Bachelor of Science degree (students may elect to receive either degree) and requires the completion of a minimum of 54 credit hours. Global Health Studies majors must present a GPA of 2.0 in all Global Health Studies coursework at graduation. All courses submitted for the major, except for transfer credits, must be taken on a letter-grade basis. Normally no more than 16 transfer credits are accepted toward the major; none of these may substitute for the core Global Health Studies courses or for the junior seminar. Students are strongly encouraged to participate in EL seminars, semester away programs, and related research or internship opportunities. Where appropriate, the Global Health Studies Steering Committee will consider credits gained through such activities as a substitute for a course or courses listed below. Students who are considering such learning opportunities must consult ahead of time with their advisor and the Steering Committee members. All substitutions of alternative courses for required courses must be approved by the Global Health Studies program chair, and students are strongly encouraged to discuss any potential course substitutions with the chair prior to enrolling in the course.

Because this major is interdivisional, students may complete any minor to satisfy the college requirement that the major and minor be in different divisions.

Requirements:

1. **Core Courses** in Global Health Studies. Take **all** of the following:
 - GHS 130 *Introduction to Global Health*
 - FSGHS 201 *Topics and Approaches in Global Health*
 - BIO 321/GHS 321 *Epidemiology*
 - GHS 370 *Medical Anthropology*
2. **Science and the Environment**
 - a. Take **one** of the following three courses:
 - ENVSC 110 *Introduction to Environmental Science*
 - BIO 220 *Organismal Physiology and Ecology*
 - BIO 221 *Genetics, Development and Evolution*
 - b. Take **one** of the following eight courses:
 - BIO 310 *Microbiology*
 - BIO 350 *Immunology*
 - ENVSC 305 *Environmental Spatial Analysis*
 - ENVSC 315 *Environmental Remote Sensing*
 - ENVSC 415 *Environmental Health*
 - ENVSC 425 *Global Health Transitions*
 - PSYCH 172 *Health Psychology*
 - PSYCH 360 *Health and Psychophysiology* (must be taken with PSYCH 365 *Health and Psychophysiology Lab*)
3. **Ethics and Social Responsibility.** Take **one** of the following courses:
 - COMJ 160 *Introduction to Community and Justice Studies*
 - PHIL 140 *Ethics and Community*
 - PHIL 310 *Global Justice*
 - PHIL 385 *Medical Ethics*
 - POLSC 140 *Political Philosophy*
4. **Resources and Economics.** Take **one** of the following courses:
 - COMRT 256 *Power, Politics, and Communication*
 - COMRT 360 *Rhetoric and Civic Engagement*
 - ECON 238 *Poverty, Inequality, and Efficiency*
 - ECON 250 *Issues in Financing Health Care*
 - ECON 256 *Economic Development*
 - ENVSC 352 *Environmental Justice*
 - POLSC 130 *World Politics*
 - POLSC 213 *Health Policy in the U.S.*
 - POLSC 245 *Politics of Third World Development*
5. **Cultures and Societies.** Take **one** of the following courses:
 - COMRT 331 *Bodies and Health in Public Culture*
 - ENVSC 340 *World Regional Geography*
 - INTDS 230 *Community Health Care: From Theory to Practice* [2 credits] and INTDS 530 *Internship in Community Health Care* [2 credits]
 - HIST 303 *The Calamitous 14th Century*
 - HIST 380 *Disease and Medicine in Modern History*
 - PHIL 205 *Literature, Film and Medicine: Ethical Perspectives*
 - PSYCH 375 *Community Psychology*
 - WGSS 100 *Introduction to Women's, Gender, and Sexuality Studies*
6. **Advanced coursework requirement.** At least eight credits of work taken to satisfy requirements 2-5 above must be at the 300 or 400 level.
7. **Elective.** Students also must take an additional four credits from categories 2-5.
8. **Foreign Language.** Students must demonstrate proficiency in a foreign language equivalent to one year of college-level study as demonstrated by the successful completion of at least one modern foreign language course numbered 120 or above.

9. **Junior Seminar.** Students must take GHS 575 *Addressing Global Health Challenges* or another approved seminar. Students should consult with their academic advisors about approved alternatives. Students are reminded that successful completion of a Junior Seminar is a college requirement for graduation, so substitutions should be made with care.
10. **Senior Project.** Take **both** of the following:
 - GHS 600 *Senior Project I* (2 credits)
 - GHS 610 *Senior Project II* (4 credits)
11. **Experiential Component.** Students are strongly encouraged to complete at least one Global Health Studies-related learning experience (e.g. EL seminars, semester away programs, and research or internship opportunities) that goes beyond clinical observation or shadowing.

The Global Health Studies Minor

The minor requires 24 total credits, a minimum GPA of 2.0, and at least 8 credits at the 300 level or above. All six courses (24 total credits) presented for the minor must be taken for a letter grade. Global Health Studies is an interdivisional minor. Students are encouraged to declare the minor by their fourth semester at Allegheny. They also are urged to enhance their studies with language courses in the Department of Modern and Classical Languages and experiential opportunities that will complement their academic training.

Because this minor is interdivisional, students may complete any major to satisfy the college requirement that the major and minor be in different divisions.

Requirements:

1. Take GHS 130 *Introduction to Global Health*
2. Take **one** of the following courses:
 - ENVSC 415 *Environmental Health*
 - ENVSC 425 *Global Health Transitions*
 - PSYCH 172 *Health Psychology*
 - PSYCH 360 *Health and Psychophysiology* (must be taken with PSYCH 365 *Health and Psychophysiology Lab*)
3. Take a total of **three** courses from at least **two** of the following categories defined above (see major description for the list of courses in each category):
 - Category 3: Ethics and Social Responsibility
 - Category 4: Resources and Economics
 - Category 5: Cultures and Societies
4. Take GHS 575 *Addressing Global Health Challenges*

Global Health Studies Courses

GHS 130 *Introduction to Global Health*

An examination of global health and development issues including region-specific challenges to the wellbeing of populations and the environment. Students explore the collaborative, interdisciplinary approach required to address complex health challenges worldwide and critically examine the notions that wealthy countries adequately protect the health of their citizens and that poor countries lack the ingenuity to solve problems and reduce risks. Historical and current case studies demonstrate that no region has eliminated challenges to health or wellbeing, no region lacks resourcefulness, and that solutions achieved in poor countries may be applicable to populations worldwide.

GHS 215 *Global Health Ethics*

An introductory ethical study of global health inequalities and our responses to them. Topics include health, justice, and human rights; moral responsibility in global health contexts; power, poverty, and health; ethics and global health governance; the ethics of international medical research; global inequities in access to medical resources; and specific health injustices associated with culture, race, and gender. *Prerequisite:* GHS 130. Distribution Requirements: PD.

GHS 321 Epidemiology (also listed as BIO 321)

A study of the determinants of health and of the patterns and distribution of disease. Students receive an introduction to epidemiology, including its historical origins, main concepts, and methods. Topics include the philosophical and ethical dimensions of epidemiology, data types and interpretation, and differences between association and causation. Students learn some research methodologies, how evidence-based recommendations are formed, and the application of epidemiological information to both social policy and clinical science. *Prerequisite:* GHS 130 or permission of the instructor. Distribution Requirements: QR, SP.

GHS 370 Medical Anthropology

An introduction to methods used by anthropologists to understand and study health, illness, health care, and health-seeking behavior. The premier method of empirical research in the field of cultural anthropology, “ethnography,” involves participant observation, conversation, and interviewing. In addition to participant observation, medical anthropologists make use of a variety of other research methods to study issues directly relevant to health, illness, and the provision of health care. To create their own “mini ethnography,” students complete the appropriate ethical training, conduct participant observation, collect field notes, learn to code and analyze qualitative data, and partner with a community institution during lab. One laboratory per week. *Prerequisite:* GHS 130 or permission of the instructor. Distribution Requirements*: IP, SB.

GHS 529 Internship: Global Health Studies

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite:* permission of instructor.

GHS 553 Junior Seminar: Behavioral Research on Alcohol (also listed as PSYCH 553)

An examination of current research and theory in the area of alcohol studies. Issues related to alcohol use and abuse are approached through the complementary disciplines of psychology and epidemiology. Special emphasis is placed on prevalence, individual and public health consequences, and causal and contributory factors, as well as treatment and policy-based interventions. In addition, attention is paid to methodological issues in alcohol research, particularly research design and statistical methods. Our study emphasizes close reading of selected primary sources in psychology and epidemiology, in-class discussion, and extensive writing, culminating in a detailed research proposal. *Prerequisites:* PSYCH 206 and PSYCH 207 and one of PSYCH 170, PSYCH 172, PSYCH 176, or PSYCH 178; or GHS 130 and one of BIO/GHS 321 or BIO 385. *Permission of the instructor is also required.*

GHS 575 Global Health Challenges

A study of changing epidemiological environments in less developed regions and an evaluation of interventions to reduce disease and improve human health. Case studies explore culturally specific approaches and strategies. Students examine economic, social, political, and ecological foundations of disease and evaluate whether current strategies and best practices used elsewhere can be applied to these cases. We also review literature that evaluates successes in comparable settings and then research and propose strategies using evidenced-based approaches. Topics may include global food security, environmental change and emerging infectious diseases, megacities, and strategies that developing nations take toward a sustainable healthy future. This class is conducted in seminar format. *Prerequisites:* Junior/Senior standing, and GHS 130 or permission of the instructor.

GHS 600 Senior Project I

The first semester of a two-semester senior project. Students refine a proposal and begin preliminary data collection as appropriate for their project. They work with the project advisor and other appropriate faculty members to finalize a research question and identify proper approaches, project design, methods of data analysis and interpretation, and modes of communication. A final proposal is presented for approval, and oral and written progress reports are discussed and evaluated. Credit: Two semester hours. *Prerequisite:* GHS 575 or another approved Junior Seminar.

GHS 610 Senior Project II

A continuation of GHS 600 leading to the completion of the Senior Project. Group and individual meetings are held to evaluate the progress of individual student research projects. Emphasis is placed on data analysis and interpretation and on

modes of presenting research findings. Students complete a written thesis and oral defense. Credit: Four semester hours.

Prerequisite: GHS 600.

Sophomore Seminar

FSGHS 201 Topics and Approaches in Global Health

An introduction to writing and speaking in the discipline of Global Health Studies. Students are introduced to the research methods and modes of communication used in the field of global health and use case studies to investigate different approaches to identifying, analyzing, and responding to global health issues. We read primary and secondary research, interpret data, evaluate tools for communicating effectively to different audiences, and explore various research methods. Ethical, cultural, and interdisciplinary dimensions of global health research and work are emphasized throughout.

Prerequisite: GHS 130.

History

Professors K. Haywood (Chair), Binnington, Herrman, Keysor, B. Miller, Orttung, Pinnow, Ribeiro, Shapiro, Wu

The study of history helps us to understand the differences and similarities between our own lives, thought, and habits and those of a variety of past and present cultures. It allows us to understand other people better through seeing them in their own contexts, and to understand ourselves through serious self-reflection. We treat history as an interpretive endeavor, investigating from various points of view the ways in which individuals and social groups have sought to order and understand their world across time. As a department, we strive to provide wisdom in particular historical fields, and to assist our students in the development of conceptual skills, critical analysis, research competence, writing fluency, and sophistication in the uses and abuses of knowledge.

History Learning Outcomes

The guiding principle behind these learning goals is to create a clear path of student development in keeping with the goals and philosophies outlined in the History Department's mission statement:

- Lower level courses (100 and 200s) seek to introduce students to the interpretative facets of history while providing them with a general level of knowledge about particular topics or national histories.
- Upper-level courses (300s) seek to deepen the awareness of contingency, both culturally and temporally, with greater emphasis on the contested nature of history's meaning.
- The 500-level Junior Seminars are meant to prepare our majors for their Senior Projects by fostering more independent inquiry both in and outside the classroom. They also provide our many minors with a capstone experience that reinforces the distinctive practices and outlooks of historians.

Taken as a whole, we believe that these learning goals reinforce the complex relationship between past and present, promote greater awareness of difference, and develop the skills—research, writing, and analysis—that are essential parts of the historian's craft.

History Major Learning Outcomes

A student who successfully completes a major in History will be able to:

- Acquire knowledge of particular historical contexts;
- Analyze historical sources;
- Understand how historians interpret the past;
- Develop an historian's skills, including reading, writing, speaking, and critical inquiry;
- Be able to execute guided and independent research projects, up to and including the Senior Comprehensive Project in History.

The History Major

The major in History leads to the Bachelor of Arts degree and requires successful completion of 46 semester credit hours of coursework in History, distributed as follows:

1. **One** course (4 credit hours) in European History
To be chosen from HIST 101, HIST 103, HIST 105, HIST 107, HIST 109, HIST 110, HIST 151, HIST 153, HIST 155, HIST 157, HIST 159, HIST 249, HIST 253, HIST 275, HIST 280, HIST 300, HIST 301, HIST 303, HIST 305, HIST 306, HIST 308, HIST 310, HIST 312, HIST 318, HIST 320, HIST 380.
2. **One** course (4 credit hours) in American History
To be chosen from HIST 162, HIST 163, BLKST 255/HIST 255, BLKST 257/HIST 257, HIST 259, HIST 261, HIST 263, HIST 265, HIST 267, HIST 269, HIST 273, HIST 275, HIST 324, HIST 326, HIST 328, HIST 330, HIST 331, HIST 332, HIST 337, HIST 339, HIST 341, HIST 343, HIST 361, HIST 508.
3. **Two** courses (8 credit hours) in non-Western History
To be chosen from HIST 113, HIST 116, HIST 117, HIST 119, HIST 165, HIST 167, HIST 169, HIST 173, HIST 272, HIST 353, HIST 355, HIST 359, HIST 365, HIST 366, RELST 144.
4. FSHIS 201 (4 credit hours)

Note: the FSHIS 201 course does **not** satisfy the European History, American History, or non-Western History requirement listed above.

History

5. One Junior Seminar (4 credit hours)

To be chosen from HIST 551, HIST 554, HIST 556, HIST 557, HIST 558, HIST 560, HIST 562, HIST 563, HIST 565, HIST 571, HIST 573, HIST 577, HIST 584, HIST 585, HIST 588.

6. One Senior Project (6 credit hours)

Which consists of HIST 600 and HIST 610.

7. A minimum of at least four courses (16 credit hours) that, excluding Junior Seminars and Senior Projects, are numbered 300 or above.

Unclassified electives (not counting toward the requirement in European, American or non-Western history) include: HIST 502, HIST 504 and HIST 506.

RELST 144 *Modern Islamic Movements* may also be counted towards the History major as a course in non-Western history or an elective.

With the approval of the department, HIST 590 (Independent Study) may be counted toward the European, American or non-Western requirement, depending on the subject studied. HIST 590 may also be counted as one of the courses meeting the 300 or above requirement, depending on the level of difficulty and the approach taken.

History majors are required to have a GPA of at least 2.0 in History at graduation. All courses presented for the major are normally taken on a letter-grade basis except for courses transferred in by incoming students and courses completed in study away programs.

A maximum of two transferred courses (eight credit hours) taken at institutions of higher learning or at secondary institutions through the Advanced Placement or International Baccalaureate programs may normally be counted toward the major. As the History Department strongly encourages its students to participate in study abroad and other study away programs, it will apply a maximum degree of flexibility to insure that students receive necessary credits for their participation in such programs.

For purposes of graduation, if a student completes more than the minimum number of courses required, the higher grade(s) will be counted in the calculation of the major grade point average, provided that the departmental distribution requirements are met.

Students must enroll in HIST 600 and HIST 610 in consecutive terms. Students may enroll in HIST 600 during the spring semester of their junior year and HIST 610 in the fall semester of their senior year, or they may enroll in HIST 600 during the fall semester and HIST 610 during the spring semester of their senior year. Students must pass HIST 600 before enrolling in HIST 610.

The History Department strongly encourages proficiency in a foreign language and enrollment in courses in the Department of Modern and Classical Languages. Language study is particularly valuable for students who are considering graduate studies in History.

The History Minor

Students who choose to minor in History are required to successfully complete a minimum of 24 credit hours of coursework in History. These must include one course each in European, American, and non-Western History (a total of 12 credit hours; see Major Requirements for course listings in each area); two courses (8 credit hours) at or above the 300-level; and a Junior Seminar. RELST 144 *Modern Islamic Movements* may be counted towards the History minor as a course in non-Western history or an elective. All courses presented for the minor are normally taken on a letter-grade basis except for courses transferred in by incoming students and courses completed in study away programs. Courses taken at secondary institutions, including Advanced Placement and International Baccalaureate courses, may not be counted toward the minor.

History Courses

Foundational Surveys

HIST 101 *The Greek World, 1184–323 BCE*

A comprehensive survey of ancient Greek political, social, and cultural history based on the interpretations of primary sources, both literary and archaeological, from the Trojan War to the end of the Classical period. Topics include the historicity of the Homeric poems, the rise of the Greek city-state and panhellenic consciousness, the constitutional history of Athens and Sparta, the Persian and Peloponnesian Wars, political participation in the Athenian democracy, reflections of contemporary history in drama (tragedy and comedy) and philosophy, and the rise of Alexander the Great. Distribution Requirements: HE, IP.

HIST 103 *The Roman World, 753 BCE–180 CE*

A comprehensive survey of ancient Roman political, social, and cultural history based on the interpretation of primary sources, both literary and archaeological, from the foundation of the city to the height of the Empire. Topics include the Roman aristocratic moral code, Roman imperialism, Roman diplomatic interaction with the Hellenistic World, the decline and fall of the Roman Republic, the establishment of the Augustan principate, and the administration of the empire in the first and second centuries. Distribution Requirements: HE, IP.

HIST 105 *Europe in the Age of Popes and Princes, 476–1400*

An introduction to the Medieval era of European history. This survey course covers the period from the fall of Rome to the 14th century. Among the topics considered are the role of the Roman Catholic Church, the development of the monarchical form of government, the institutions of feudalism and manorialism, the emergence of commerce, urban life, and the universities, the social, religious, and political calamities of the 14th century, and the rise and decline of traditional forms of authority in the West. Distribution Requirements: HE, SB.

HIST 107 *Europe in the Age of Recovery and Reformation, 1400–1648*

An introduction to the Early Modern Era of European history. This survey course covers the period from the Renaissance to the Thirty Years War. Among the topics considered are the re-emergence of social, cultural, and political life following the calamities of the 14th century, the Protestant and Catholic Reformations, and the age of religious warfare in the 16th and 17th centuries. Distribution Requirements: HE, SB.

HIST 109 *Europe in the Age of Modernization and Revolution, 1648–1914*

A survey of three centuries of European history, with focus on the ages of absolutism and enlightenment, the French Revolution and subsequent revolts, the evolution of liberal democracy, the industrial revolution and the development of a modern economy, and the emergence of nationalism and socialism. Distribution Requirements: HE, SB.

HIST 110 *Europe in the Age of Dictatorship and Democracy, 1914–Present*

An introduction to major problems in the social, cultural, and political history of Europe in the 20th century, from the disillusionment of World War I to the challenges of post-communism. Among the topics explored are the impact of total war on European civilization, Nazism and the rise of authoritarian regimes during the inter-war period, the significance of the Russian Revolution for Europe, decolonization and Europe's changing place in world affairs, the reconstruction of democracy after 1945, the division of Europe during the Cold War, and the future of the nation-state within a unified Europe. Distribution Requirements: HE, SB.

HIST 113 *The History of Modern East Asia, 1800–Present*

A survey of political, social, economic, and cultural trends in East Asia from 1800 to the present. The course focuses primarily upon China, Korea, and Japan and to a lesser degree Vietnam. After an introduction to the tenets of East Asian civilization, we explore the profound changes that occurred in all four states as interaction with Western nations increased in the nineteenth century. We then examine the political, economic, and military conflicts of the twentieth century and conclude by focusing on the tremendous economic development that has shaped the region in more recent decades. Distribution Requirements: HE, IP.

HIST 116 Colonial Latin America

An introduction to Latin American history from the pre-Columbian era to the independence period. Topics considered include the diversity and complexity of Latin American indigenous civilizations before the arrival of Europeans; the Spanish impetus for New World exploration and conquest; the military conquest of the Aztec and Incan Empires; and the political and religious institutions, socio-economic structure, racial and ethnic attitudes, and cultural underpinnings of Spanish colonialism. Particular attention is paid to the modern ramifications of Latin America's colonial past. Distribution Requirements: IP, PD.

HIST 117 Modern Latin American History

An examination of 19th- and 20th-century Latin American struggles to create effective national, political, and economic systems in a postcolonial global context. Through particular attention to legacies from the colonial period, students explore how gender, racial, ethnic, and class differences undergird political and economic structures, and how this historical relationship contributes to recent characteristics of the region, including "underdevelopment," dictatorship, guerrilla warfare, narco-trafficking, democratization, and neo-liberal trade. Distribution Requirements: IP, PD.

HIST 119 West African Civilizations

A broad survey of West African history from the pre-colonial period to the present. Our study focuses on a number of key themes, including traditional West African culture, the rise of pre-colonial West African states, the transatlantic slave trade, the colonial era, anti-colonial movements, national independence, and major post-colonial developments. Distribution Requirements: HE, IP.

National Surveys

HIST 151 History of Medieval England, 1066–1485

A survey of English history from the Norman Conquest to the Wars of the Roses. Students consider the social and economic foundations of political and cultural events. Emphasis is given to the development of English political and religious institutions. Among the topics considered are the establishment and growth of the monarchical form of government, the origin and development of the representative institution of parliament, the successes and failures of medieval monarchs, the dynamic tensions between local feudal authority and the royal court, the Hundred Years War, and the Wars of the Roses. Distribution Requirements: HE, IP.

HIST 153 History of Imperial Russia, 1682–1917

A survey of Russian intellectual, cultural, and political history from the reign of Peter the Great to the fall of the Romanov dynasty in the February Revolution of 1917. Problems considered include the strengths and weaknesses of autocracy, Russia's rise to prominence as a European power, the role of serfdom in Russia's development and underdevelopment, the formation of Russia as a multi-national empire, the politics and culture of the intelligentsia, and the internal dynamics which helped produce revolution at the beginning of the 20th century. Distribution Requirements: HE, IP.

HIST 155 The Soviet Century, 1917–Present

A survey of major problems in the history of Russia and the Soviet Union during the 20th century, from the promise of the October Revolution of 1917 to the uncertainties of post-Soviet life. Among the topics explored are the causes of the 1917 revolutions, the nature of Bolshevism, revolutionary culture and utopianism during the 1920s, Stalinism and the transformation of Soviet society, the idea of the Soviet Union as a multi-national polity, the Great Patriotic War against Nazism, de-Stalinization and Soviet culture, the reconstruction of the Soviet system under Mikhail Gorbachev, and the complex legacies of Soviet socialism. Distribution Requirements: HE, IP.

HIST 157 History of Modern France, 1789–Present

A survey of the major developments in French history beginning with the French Revolution. The course focuses on the economic and social foundations established for modern France in the Revolutionary and Napoleonic era and its political, intellectual, and cultural life since 1789. It considers such topics as the causes and importance of the Revolution, Napoleon's career, the Revolutions of 1830 and 1848, the empire of Napoleon III, imperialism, socialism, industrialism, the impact of World War I, the Popular Front, Vichy and DeGaulle. Distribution Requirements: HE, SB.

HIST 159 History of Modern Germany

An introduction to the historical, political, social and intellectual background of modern Germany. Typical discussion topics include the Congress of Vienna, the 1848 revolution, the first unification of 1871, the Weimar Republic, National Socialism, and the division of Germany after World War II. Special attention is paid to the unification process since 1989 and Germany's role in international politics. Distribution Requirements: HE, IP.

HIST 162 History of the United States to 1865

An examination of the forces that have shaped the experiences of the American people from the age of settlement through the Civil War. The course focuses on relations between European settlers and Native Americans, the development of Anglo-American colonial society, the foundation of the new nation, the emerging industrial economy, the causes of sectionalism, and the crisis of the Civil War. Distribution Requirements: HE, PD.

HIST 163 History of the United States, 1865–Present

An exploration of the emergence of modern America, addressing the effects of immigration, industrialization, imperialism, war and social change on the development of the United States since the Civil War. Distribution Requirements: HE, PD.

HIST 165 Pre-Modern China: Religion, Philosophy, and Society

An examination of pre-modern Chinese political and social history from 500 BCE to 1800 CE. This course focuses on the origin and transformation of the Chinese nation-state prior to its full-scale encounter with the West. Topics discussed may include: the origin of Chinese civilization, the formation of the nation-state, contending schools of philosophy and thought, the cycle of dynasties, the rise of pre-modern capitalism, women's experiences, Han and minority relations, religions, and secret societies. Distribution Requirements: HE, IP.

HIST 167 Modern China, 1800–2000

An examination of the recent Chinese past. Topics discussed include: the last century of Qing rule, confrontation with Western nations, the Republican period, the warlords and the Nationalist and Communist movements in the early twentieth century, Japanese aggression, the communist state, the Cultural Revolution, and economic growth in the 1980s and 1990s. Distribution Requirements: HE, IP.

HIST 169 The History of Mexico

A survey of the Mexican past from the Mayan and Aztec empires, through the Spanish conquest, the colonial era, Independence, the Revolution, and the late 20th century. Special attention is paid to migration history, environmental history and the history of culture. Distribution Requirements: IP, PD.

HIST 173 History of South Africa

A survey of major events in South African history. Students learn about a wide range of topics including, but not limited to, South African cultures, geography, historical figures, and colonial encounters. We begin with a unit on the original inhabitants of South Africa—the Khoi, the San, and various Bantu-speaking groups—then transition into the period of Dutch settlement, the period of English settlement, the era of nation formation, the rise and fall of apartheid, and post-apartheid South Africa. Distribution Requirements: IP, PD.

Themes in History

HIST 249 The Mystery of Courage

An exploration of courage in historical context. Students consider what it means to be courageous. Topics discussed include the virtue of courage, its deficiency (cowardice), and its excess (recklessness), and the roles of nature and nurture in creating courage. Types of courage studied include valor, sacrifice, and resistance. Specific illustrations include speaking truth to power, violent and non-violent forms of dissent, and social protest. Specific types include the warrior, the dissident, and the rescuer. Case studies may include: the Spartan paradigm, the Zealots of Masada, Thomas More, Henry David Thoreau, Marion van Binsbergen Pritchard, and Nelson Mandela. Distribution Requirements: HE, SB.

HIST 253 Citizenship, Democracy, and the French Revolution

An introduction to the study of the French Revolution in which students are assigned and act out positions as leaders of major revolutionary factions. Role-playing begins as the newly-emerged National Assembly struggles to create a

Constitution amidst internal chaos and threats of foreign invasion. Questions considered include: will the king be permitted to retain a semblance of power; can the Assembly contain the radical demands of “the People;” will Catholic priests obey the new revolutionary government or the dictates of the Pope; can the revolutionaries create a stable democratic regime, or was the violence and bloodshed of the Reign of Terror inevitable? Distribution Requirements: CL, HE.

HIST 255 *African-American History to 1865* (also listed as BLKST 255)

A survey of the history of African-Americans from the earliest appearance of Africans in colonial North America to the end of the Civil War. Students explore slavery, slave society and economy, slave culture, African Americans and politics, and the abolition of slavery. Distribution Requirements: HE,PD.

HIST 257 *African-American History since 1865* (also listed as BLKST 257)

A survey of African-American history from the end of the Civil War to the present. Students explore topics such as Reconstruction, the rise and fall of Jim Crow, the Great Migration, the Harlem Renaissance, the Civil Rights Movement, Black Power, and Hip Hop. The lives of major figures in America’s racial history are also examined. Distribution Requirements: HE, PD.

HIST 259 *The South in American History*

A topical survey of major historical issues in the history of the American South from first settlement to the present day. Students focus on race relations, including slavery, segregation, and civil rights; the formation and persistence of a regional identity, including its relationship to national and other regional identities; and the evolution of Southern society, economics, politics, and culture. Distribution Requirements: HE, PD.

HIST 261 *A Survey of American Women’s History*

A survey of the social, political, and economic role of women in American history from the colonial period to the present. Among the issues discussed are family as a force in American history, the impact of feminism on the major institutions of American life, the working lives of women, women’s sexuality, the role of race and ethnicity in shaping women’s lives, and the emergence of women on the political stage. Distribution Requirements: PD, SB.

HIST 263 *Biography and American History*

An introduction to American History through the study of biographical and autobiographical literature. Students will read biographies and autobiographies of such persons as George Washington, Louisa May Alcott, Frederick Douglass and Alice James. Special attention is paid to the relationship of biography to history, and how historians interpret the lives of those who have lived before them. Open to first-year students and sophomores only. Distribution Requirements: HE, PD.

HIST 265 *Myth and Reality in the American Past*

An investigation of the myths of American history, why they were created, and how they reflect American values. Some myths that might be explored are those associated with the noble savage, George Washington, the Plantation South, as well as the “Camelot” myths created about the Kennedy Administration. Students will formulate their own interpretations of people and events that have been the object of America’s mythological past. Open to first-year students and sophomores only. Distribution Requirements: CL, HE.

HIST 267 *Abraham Lincoln: The Man and the Myth*

An examination of the life, career, and legacy of Abraham Lincoln, 16th President of the United States. Students explore Lincoln as a politician in his own lifetime and Lincoln as an increasingly legendary figure in the years after his assassination. Particular attention is paid to Lincoln’s own words and the interpretations placed upon them by succeeding generations of Americans. Open to first-year students and sophomores only. Distribution Requirements: CL, HE.

HIST 269 *The Sixties in America*

An examination of the significance and the impact of one of the most dramatic decades in American history. Particular attention is devoted to an elucidation of various “myths of the sixties” and to the role of the mass media in generating these myths. Open to first-year students and sophomores only. Distribution Requirements: CL, HE.

HIST 270 *Reagan's America*

A survey of the middle decades of the 20th-century United States as seen through the life and career of Ronald Reagan. Students trace Reagan's experiences as an actor, governor, and eventual president while exploring Hollywood and anti-Communism, state reactions to student protests, and impacts of conservative policies. Particular attention is paid to public perceptions of Reagan and his policies. Distribution Requirements: CL, HE.

HIST 272 *Socialism and Post-Socialism in People's Republic of China*

An historical examination of the ideology, state policies, and social transformation in China's socialist construction and market reform from 1949 to the present. We study the Chinese socialist state's consolidation of control over all aspects of social life in the 1950s; its transformation of commerce, agriculture, and Chinese society through various campaigns; its industrialization and search for an alternative modernization path through the Great Leap Forward of 1958; and China's marketization and the rise of civil society since the 1980s. Students analyze the PRC's social control and governance, Maoist legacies, erosion of socialist ideals, and globalization's impact on Chinese society. Distribution Requirements: HE, IP.

HIST 273 *Piracy in the Americas, 1500–1830*

A study of piracy in the Americas from 1500 to 1830 that traces the evolution of maritime piracy and examines the experience of both predators and prey. Discussion of pirate ethics, daily life, and criminal activity is followed by an assessment of piracy's political and economic impact on Europe and its American colonies. Analysis of piracy in popular culture and imagination completes the semester. Distribution Requirements: HE, SB.

HIST 275 *Reacting to the Past*

An examination of key historical moments and trends in American history via historical role-playing. Students take on roles in elaborate games set in the past. While students are obliged to adhere to the philosophical and intellectual beliefs of the historical figures they have been assigned, they devise their own persuasive expression of those ideas in papers, speeches, or other public presentations. Our exploration presumes that individuals play a significant role in history; it asserts that broader economic and social forces place constraints on what individuals may do, but that those forces do not determine human events—people do. Distribution Requirements: CL, HE.

HIST 277 *An American History of the Body*

A survey of the history of American healthcare and ideas about the body from colonial American times through the twentieth century. Students explore healthcare practices, societal understandings of the human body, consent and relationships between care givers and care providers, and the influence of sex, gender, race, age, and morality on healthcare practices. Distribution Requirements: HE, PD.

HIST 280 *Bodies, Bloodletting, and Bile: Healers, Health, and Medicine from Antiquity through the Early Modern Period*

A survey of the history of medicine from Antiquity through the seventeenth century. This study traces the development and transmission of medical knowledge and practices between the Latin West, the Middle East, India, China, and the Americas. Students learn about medical theory and practice, concepts of the body, modes of healing and therapeutics, and the medical marketplace in their social and cultural contexts. Students also consider different historical debates about these topics. Distribution Requirements: IP, SB.

Advanced Themes in History

HIST 300 *The Crusades*

An examination of an age of Christian imperialism. Students investigate the motives and conduct of Europeans in the Age of the Crusades from the Council of Clermont in 1095, where Pope Urban II called for European rulers, nobles, and knights to wrest the Holy Land from the Muslims, to the fall of Acre, the last Christian stronghold in the Middle East in 1291. Among the topics considered are the explicit and implicit goals of the leadership of the Catholic Church and the European kingdoms, the organization and transportation of armies to fight for the Christian cause, and the rise and fall of the Christian kingdoms in the Middle East. *Prerequisites: HIST 105 or permission of the instructor.* Distribution Requirements: HE, IP.

HIST 301 Chivalry

A study of the code of conduct for the Medieval European knight. Students investigate the principles and practices of the chivalric tradition during the period from the 12th to the 15th centuries. Among the topics considered are the social status of the knight, the techniques of knightly warfare, the tradition of courtly love, and the ideals and realities of knightly behavior. Consideration is given to transformation of the warrior of the Crusading era to the courtier of the age of the Renaissance. *Prerequisites: HIST 105 or permission of the instructor.* Distribution Requirements: HE, SB.

HIST 303 The Calamitous 14th Century

The study of an age of unprecedented natural and human disasters in Europe. Students consider diverse topics including climate change; the Black Death; endemic warfare; the class revolts of the French Jacquerie, the English Peasants' Rebellion, and the Florentine revolt of the Ciompi; the collapse of European banking; the end of the Champagne Fairs; the constriction of trade; and the depopulation of both the cities and the countryside. *Prerequisites: HIST 105 or permission of the instructor.* Distribution Requirements: HE, IP.

HIST 305 The Italian Renaissance

The age of experimentation. An examination of the principal developments of the period of the Renaissance. Among the topics considered are the rise of capitalism, social change and dislocation, the Italian city-states, the cultural and intellectual revival, and Humanism. The course concentrates on Italy during the period 1300-1500. *Prerequisites: HIST 105 or HIST 107, or permission of the instructor.* Distribution Requirements: HE, IP.

HIST 306 Enlightenment and Absolutism

An examination of European social, cultural, intellectual, political and economic life from 1648 to the eve of the French Revolution. The rise of absolutist states, overseas expansion and competition for empires, the ideas of the Enlightenment, and Enlightened Despotism will be considered. *Prerequisites: HIST 107 or HIST 109 or HIST 157 or HIST 263, or permission of the instructor.* Distribution Requirements: HE, SB.

HIST 308 The French Revolution and Napoleon

An examination of the origins, nature, and impact of the French Revolutionary and Napoleonic period. Among the topics considered are the birth of modern democratic political culture, the causes of revolutionary violence and terror, and the rise of modern nationalism. *Prerequisites: HIST 109 or HIST 157 or HIST 253 or HIST 306, or permission of the instructor.* Distribution Requirements: PD, SB.

HIST 310 Europe at the Turn of the Century, 1880–1917

A consideration of the cultural, social, and political questions associated with the rise of modern life and the weakening of traditional forms of thought and association. Topics considered include the concepts of individualism and society, the ideology of progress, the cultural dimensions of science and technology, the place of the city and urban culture in European civilization, the politics of class, race, and gender, the importance of Empire for European self-identity, and the significance of World War I and the Russian Revolution as expressions of the conflict between tradition and modernity. *Prerequisites: HIST 109 or HIST 110, or permission of the instructor.* Distribution Requirements: HE.

HIST 312 State and Society Under Communism and Fascism

A comparative investigation of the totalitarian regimes of Italy, Germany, and the Soviet Union during the period 1917-1945. Emphasis is given to the role of modern states in sculpting and mobilizing society. Topics include the creation of the new man and woman, the politics of reproduction and populations, the definition of citizenship and participation, the organization of politics and the economy, and the aesthetics of power. These themes are explored through the critical study of film, art and architecture, literature, and historical texts. *Prerequisites: HIST 109 or HIST 110 or HIST 155 or HIST 159, or permission of the instructor.* Distribution Requirements: HE, SB.

HIST 318 Environmental Thought in Modern Europe

An examination of the origins of environmental and ecological consciousness in modern European society. Through a study of the works of leading social and political theorists and philosophers, this course traces the development of skepticism regarding the inherently beneficial nature of technological progress and scientific advance back to the dawn of the Industrial Age in late 18th-century Europe. *Prerequisites: One course in European history, or permission of the instructor.* Distribution Requirements: CL, HE.

HIST 320 Writing Ancient History

An examination of the methodological objectives and practices of ancient historians. Students read extensively in primary sources and analyze historiographical strategies. Among the topics considered are the different effects of discursive and analytical styles, the relation between personal memoir and history, biography as history, divergent chronological frameworks, how Greeks and Romans viewed each other, and Roman innovations on Greek traditions. *Prerequisite: HIST 101 or HIST 103 or permission of the instructor.* Distribution Requirements: HE, IP.

HIST 324 Life in Colonial America

An exploration of the development of Anglo-American society and culture in North America. The transfer of English ideas and institutions to the new world, the conflicts between native, white, and African cultures, the development of distinctive social, economic, and political differences in the colonies, and the emergence of an American identity are studied. *Prerequisite: HIST 162 or permission of the instructor.* Distribution Requirements: HE, PD.

HIST 326 The American Revolutionary Era

An analysis of the evolution of the United States from the French and Indian War to the Constitutional Era. The course is topical in organization. Students explore the society, economy, politics and religion of the Revolutionary Era. Special attention will be paid to the Revolutionary War itself, and the impact of that war on the daily lives of both women and men. The experience of native Americans and slaves in the Revolutionary Era is also studied. *Prerequisite: HIST 162 or permission of the instructor.* Distribution Requirements: HE, SB.

HIST 328 The War of 1812 and the Development of the American Nation

An examination of the history of the antebellum United States from 1812 to 1861, concentrating on the development of the nation after the War of 1812. Students focus on issues of sectionalism and social reform, including the age of Andrew Jackson, slavery, the causes of the sectional conflict, and the evolution of American society, economics, politics, and culture. *Prerequisite: one course in U.S. history.* Distribution Requirements: HE, PD.

HIST 330 The Gilded Age and the Birth of Modern America

An examination of the transition of the United States from agrarianism to industrial world power (1876-1919). Topics may include the Gilded Age, industrialization, American imperialism, the rise of Jim Crow, urbanization, Women's Suffrage, and the Great War. *Prerequisite: HIST 163 or permission of the instructor.* Distribution Requirements: HE, PD.

HIST 331 Problems in Nineteenth Century America

A topical study of major historical issues in the United States during the nineteenth century. Topics may include the Civil War in American memory; the formation of American nationalism; the emergence of reform movements, including abolition and emancipation, temperance, women's rights, and evangelism; the United States in the context of the Atlantic world; and the development of constitutionalism and law in the United States. *Prerequisite: one course in 19th-century U.S. history or permission of the instructor.* Distribution Requirements: HE.

HIST 332 Problems in Contemporary America

A thematic study of major historical issues in the United States since the Great War. Topics include the Jazz Age, the Great Depression, the Second World War, the Cold War, the Civil Rights Movement, Second Wave Feminism, the Gay Rights Movement, the Vietnam War, the Rise of the Religious Right, the Wars of the Persian Gulf, 9/11, and the Global War on Terror. *Prerequisite: HIST 163 or permission of the instructor.* Distribution Requirements: CL, HE.

HIST 337 History of American Masculinity

An exploration of the meaning and construction of masculine identities in America from the founding of the Republic to the present. Male experiences, including social class, race and ethnicity, sexual orientation, and age, are investigated from a chronological and thematic perspective. The link between masculinity and the popularity of sports, pornography, and the American proclivity for violence are also examined. *Prerequisites: HIST 162 or HIST 163, or permission of the instructor.* Distribution Requirements: CL, PD.

HIST 339 Problems in the History of American Women

A thematic study of major issues in the history of American women. Topics may include: the experiences of women in the settlement process; the effects of war and revolution on women's lives; the impact of the women's rights and feminist

History

movements on American women and men; how race, ethnicity, and class have shaped women's lives; the history of sexuality; the changing nature of women's roles within the family; and women and work in American history. *Prerequisite: HIST 261 or permission of the instructor.* Distribution Requirements: PD, SB.

HIST 341 American Environmental History

A survey of the interaction between humans and the natural world in the United States since colonial times. Students are introduced to major themes, events, scholars, and methodologies in American environmental history. Topics, arranged chronologically and thematically, include the conquest and settlement of the future United States, industrialization, the U.S. conservation and environmental movements, and the place of nature and environmentalism in post World War II American Culture. *Prerequisite: HIST 162 or HIST 163, or permissions of the instructor.* Distribution Requirements: CL, HE.

HIST 343 Violence and the Coming of the American Civil War

An examination of the era of Civil War in the United States, from 1830 to 1880, concentrating on issues of violence. Students examine a variety of civil and military issues, such as the causes of the war, the limits of individual dissent, and changes in the status of African Americans. In particular, students explore the two great debates of the antebellum period: one concerning slavery and the other concerning the power of the federal government. *Prerequisite: one course in U.S. history.* Distribution Requirements: HE, PD.

HIST 345 Skyscrapers, Slums, and Sprawl

An examination of the history of urban and suburban development in the United States from the colonial era to the present, with emphasis on the twentieth century. Among the issues discussed are urban policy, environmental impacts, and the relationship between the built environment and social divisions such as race, class, and gender. *Prerequisite: one course in U.S. history.* Distribution Requirements: CL, SB.

HIST 347 Tax and Spend

An examination of debates over taxation, welfare, and government subsidies in the United States from the 1930s to the present. Our study takes a broad view of government support, including that provided to the general public, families, and businesses. Among the issues discussed are the rationale behind different forms of subsidies, shifts in political support, and changing attitudes toward taxation. *Prerequisite: one course in U.S. history.* Distribution Requirements: CL, PD.

HIST 353 Women and Revolution in China

A study of Chinese women's emancipation from 1898 to 1989 as a historical process. Students examine the experiences of Chinese women, including their place within the patriarchal system, the rise of an emancipation movement, and their role as agents of change. Among the topics covered are the relationship between women's liberation and Chinese nationalism, family and marriage, the challenges for women under socialism and globalization, and feminist literature and film. *Prerequisite: HIST 113 or HIST 167, or permission of the instructor.* Distribution Requirements: HE, IP.

HIST 355 Modern Chinese Warfare

An historical examination of modern Chinese warfare from the 1890s to the 1980s. With the two Sino-Japanese Wars (1894 and 1937-1945), the Chinese Civil War (1947-1949), and China's involvement in the Korean and Vietnam Wars as case studies, we consider Chinese military strategy from multiple perspectives. Students investigate ancient Chinese military strategy and its modern application, the modernization and politicization of the Chinese army in the 20th century, the relationship between the army and the political parties, guerrilla warfare, logistics, and the impact of war on Chinese society and domestic politics. *Prerequisite: HIST 113 or HIST 167, or permission of the instructor.* Distribution Requirements: HE, IP.

HIST 359 Apartheid in South Africa and Beyond

An exploration into the system of apartheid and the way it has been represented in academic, political, and popular writings. We cover the historical forces that helped to produce the apartheid system and examine its socio-cultural, political, economic, and racial dimensions. Students consider different representations of apartheid and are introduced to key works written by historians, anti-apartheid activists, Afrikaner statesmen, American presidents, and science fiction authors. Distribution Requirements: IP, PD.

HIST 361 Race and Identity in the Atlantic World

An intellectual history of racial identity in the Atlantic world. We explore the concept of race and consider its transnational development from 1492 to 1965, with a focus on the formation of distinct racial categories and how those categories affected the way that people saw themselves and each other. Places such as the West Coast of Africa, Haiti, and England are covered. Special attention is given to the United States, a nation that played a central role in contributing to the creation of the concept of race. Distribution Requirements: IP, PD.

HIST 365 Conquest! Latin America 1492–1600

An analysis of the physical conquest of Latin America and an examination of the ensuing blend of Spanish and Indigenous cultures. Topics considered include Spain's assault on the Aztec, Inca, and Maya, Catholic efforts to convert Indigenous peoples, the rise of the Mestizo population, the role of women in the early colonial world, the effect of disease on the Native population, and creation of a "civil society" governed by Spanish crown. *Prerequisite: One course in Latin American history, or permission of the instructor.* Distribution Requirements: IP, PD.

HIST 366 Dictators and Development in Latin America

An examination of twentieth-century Latin American dictatorships and the developmental ramifications of authoritarian rule. Subjects considered include dictators and the cult of personality, the search for economic development, leftist political struggles, the position of indigenous groups within Latin America, continuing violence and social problems, the Cold War and U.S. involvement in Latin America, and present-day efforts to come to grips with a totalitarian past or present. Countries addressed may include Argentina, Brazil, Chile, Colombia, Cuba, Guatemala, Nicaragua, and/or Peru. *Prerequisite: One course in Latin American history, or permission of the instructor.* Distribution Requirements: IP, PD.

HIST 367 History of Political Crime and Political Justice

An examination of how various societies have dealt with political opposition throughout history. Why do some societies tolerate activities that others regard as crimes? Why do some societies treat "political criminals" relatively leniently while others do not? How far can a society extend the limits of tolerance and leniency and still survive? *Prerequisite: One course in European history, or permission of the instructor.* Distribution Requirements: CL, HE.

HIST 380 Disease and Medicine in Modern History

An investigation of responses to disease in different historical periods, with an emphasis on Europe and the United States in the 19th and 20th centuries. The social and cultural influences on medicine and public health are a recurring theme. Among the topics explored are the definition of health and illness, epidemic and endemic diseases, the rise of professional and scientific medicine, therapeutics and theories of disease causation, public health and the individual, and the significance of class, gender, and race as factors shaping the experience of disease. *Prerequisite: Prerequisite: One course in US or European history, or permission of the instructor.* Distribution Requirements: HE, PD.

Internships

HIST 502 Internship with Special Collections, Pelletier Library

Liaisons: History Chair and Director of Special Collections

Inventorying, scanning, cataloging and indexing papers, letters, documents and artifacts in Special Collections under the supervision of the Library staff. Creating web sites for these collections is an important part of the intern's responsibilities. Interns also work on the College's Ida Tarbell Web Site and participate in the preservation of materials in that collection. *Prerequisites: Permission of the History Department Chair and the Director of Special Collections.*

HIST 504 Internship with the Historian of the College

Liaisons: History Chair and College Historian

Researching the history of Allegheny College as well as planning and installing displays of the College's history on campus. Interns work closely with the Historian of the College, the College's Heritage Committee, the staff of the Pelletier Library's Special Collections, and local historical societies. *Prerequisites: Permission of the History Department Chair and the Historian of the College.*

HIST 506 Internship with the Archivist, Pelletier Library

Liaisons: History Chair and College Archivist

History

The design and execution of interviews as part of an ongoing oral history project of Allegheny College under the supervision of the College Archivist. The intern's responsibilities may include transcribing interviews and handwritten material in the collection, inventorying and describing collection materials, and conducting research for administrative histories and for exhibit preparation. Interns may design and install exhibits of College history within the library and elsewhere on campus. *Prerequisites: Permission of History Department Chair and the College Archivist.*

HIST 508 History Under Sail: The Flagship Niagara and the Great Lakes

Liaison: Professor Binnington

An experiential learning internship on the maritime history of the Great Lakes. The Flagship Niagara is a replica of the square rigged sailing warship which fought at the 1813 Battle of Lake Erie. In a three week program, students experience life during the Age of Sail, gaining lessons in seamanship, history, and citizenship. Students acquire a deeper understanding of maritime history and seafaring culture through living similar challenges and conditions faced by seafarers of the past. This internship is offered in partnership with a consortium of local colleges and the Erie Maritime Museum. *Prerequisite: Permission of the instructor.*

HIST 529 Internship: History

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

Junior Seminars

HIST 551 Orality and Literacy in Ancient Greece

An examination of speech and writing as media of communication in ancient Greece, from the time of Homer into the fourth century BC. The course focuses on the development of writing in the Greek world and the effect of this development on Greek culture and society. Among the topics studied are the oral performance of poetry, the function of writing in the Athenian democracy, and the importance of rhetoric for the intellectual life of the classical period. *Prerequisites: HIST 101 or HIST 103, and permission of the instructor.*

HIST 554 Dreaming in Greece and Rome

An exploration of the interpretation and explanation of dreams in Greco-Roman antiquity, from the time of Homer to the early Roman Empire. We approach the material with the framework of dream categorization developed by ancient analysts, who variously treated dreams as divine messages or as a physiological phenomenon. Topics include dreams and divination, dreams as a literary motif, ancient dream handbooks and diaries, dreams in natural and medical philosophy, and the personal statements of dreams preserved on stone. *Prerequisite: History 101 or 103.*

HIST 556 The French Revolution

An examination of various historical problems raised by the French Revolution. Among the topics considered are the struggle between revolutionary moderates and radicals, the role of public opinion, the question of revolutionary violence and terror, and the impact of international war. *Prerequisite: HIST 109 or HIST 157 or HIST 253 or HIST 306 or HIST 308, and permission of the instructor.*

HIST 557 The Hundred Years War

An examination of the struggle between England and France in the 14th and 15th centuries. Students explore the dynastic dispute over the French throne between the English royal house of Plantagenet and the French royal house of Valois. Among the topics considered are the battles that characterized the struggle, the personalities and capabilities of military and political leaders, the principles of chivalry, the development of strategy and tactics, and the rise of the mercenary. *Prerequisites: permission of the instructor and one of HIST 105 or HIST 301 or HIST 303.*

HIST 558 Revolutionary Russia, 1900–1921

A critical study of the major historical interpretations and problems regarding the fall of the Russian autocracy and the rise of the Soviet Union, the world's first communist regime. Analysis focuses on scholarly works, primary sources, memoir accounts, art, literature and film to understand how the Russian Revolution has been portrayed variously in historical memory. Among the major themes explored are the role of personality, accident, and political parties, the influence of

ideology on individual and government action, social polarization and the possibility of evolutionary change in Russia, and the creation of historical myth under the Bolsheviks. *Prerequisite: HIST 153 or HIST 155 or HIST 253 or HIST 312, and permission of the instructor.*

HIST 560 Witchcraft in Colonial America

This seminar investigates the social, political, economic, religious, and literary interpretations of the Salem Village witchcraft trials of 17th century Massachusetts Bay Colony. The culture of Puritanism is explored. Students are required to formulate their own interpretation of the events studied. *Prerequisites: HIST 324 and permission of the instructor.*

HIST 562 The Family in American History

The evolution of the family as a social, economic, and political institution is explored from the colonial period of American history to the present. The impact of wars, industrialization, immigration, and feminism on the family is analyzed. Special attention is paid to the methodology of family history and the relationship of family history to other forms of history and historical writing. *Prerequisites: HIST 162 or HIST 163, and permission of the instructor.*

HIST 563 The Atlantic World

A chronological and thematic study of the major issues in the development of the Atlantic world beginning with the voyages of Christopher Columbus and ending with the emancipation of the last African slaves in 19th-century Brazil. Students examine the development of trade, commerce, and the cultural and social exchange between Europe, Africa, and the Americas. Issues discussed include colonialism, mercantilism, the Columbian Exchange, the development of Indian and African slavery, the process of emancipation, and the role of the New World environment in shaping the development of the various cultures in the Americas. *Prerequisites: HIST 162 or HIST 163 or HIST 255, and permission of the instructor.*

HIST 565 Memory and the American Civil War

An examination of the period of the American Civil War and Reconstruction, through the lens of social memory. Students explore issues that include how we have remembered the sectional development of politics, the changing sphere of liberty, the abolition of slavery and the developing meaning of freedom, the nature of military combat during this period, the relationship between the federal and state governments, and the relationship between politics and the Constitution. *Prerequisites: Permission of the instructor and one of HIST 259, HIST 267, HIST 328, or HIST 343.*

HIST 571 The Civil Rights Movement

An exploration of African American freedom movements in the United States in the post-1945 era. Through a focus on the efforts of African Americans and their allies to overcome persistent white supremacy and achieve racial justice in the United States, students explore the legal, historical, economic, and social origins of the civil rights movement, as well as its impact on American culture, politics, and international relations. *Prerequisites: HIST 162 or HIST 163 or HIST 257, and permission of the instructor.*

HIST 573 Mao's Cultural Revolution

A critical study of the Chinese Cultural Revolution (1966-1976) as sociopolitical movement, collective memory, and historical trauma. The course provides an historical perspective to analyze the origin, process, and aftermath of the Cultural Revolution as both the continuation and the culmination of modern Chinese political crisis. Subjects considered include the rise of the cult of personality, anti-traditionalism, antiintellectualism, xenophobia, student activism, changing gender identity, and state-sanctioned political violence. *Prerequisites: HIST 167 and permission of the instructor.*

HIST 577 Inventing Mexico: Nationalism and National Identity in a Global Context

An investigation of the cultural and intellectual consequences of the Mexican Revolution. Arguments over the rights and responsibilities of citizens, proper and improper ways to represent Mexicans in art and mass media, patriotism, public education and—above all—the definition of “Mexican,” have dominated political discourse and shaped daily life for Mexicans since 1920. This seminar examines some of the books, films, paintings and other artifacts that have played a part in such arguments, and studies historians’ interpretations of the questions of national identity and nationalism in the 20th century. *Prerequisites: One course in Latin American history, and permission of instructor.*

HIST 584 Doctors and Deviants

An historical study of social deviance in medical thought and practice with a concentration on the United States and Europe in the 19th and 20th centuries. A close reading of scholarly writing and primary evidence is emphasized to explore the sources of medicine's power in modern society and culture. Among the historical problems examined are scientific theories of human behavior, the delineation of the normal and pathological, the intersection of medicine and law, the statistical "discovery" of social illness, eugenics and the concept of degeneration, and the role of class, gender and race in the definition of the deviant individual. These themes are investigated through such problems as suicide, criminality, juvenile delinquency, prostitution, homosexuality and madness. *Prerequisite: HIST 310 or HIST 380, and permission of the instructor.*

HIST 585 Great Trials in History

A consideration of selected "show" trials in Western history as a means of investigating the phenomena of law and justice, political crime and political justice, and the relationship between the individual and the state. Through an examination of such diverse material as primary sources, secondary accounts, imaginative literature, and films, the seminar focuses on the institution of the trial as a political and philosophical event. Examples of types of trials to be considered include those of Socrates, Jesus, Thomas More, Anne Boleyn, Galileo, Charles I, Louis XVI, Tom Paine, Sacco and Vanzetti, and John Scopes. *Prerequisite: Permission of the instructor.*

HIST 588 Nationalism in the Era of the American Civil War

An examination of the development of nationalism in the Union and Confederacy during the period of the American Civil War. Students explore issues that include the pre-war development of American nationalism, the development of nationalist sentiments in the North and South during the war, and the persistence and development of such sentiments after the war's end. *Prerequisites: Permission of the instructor and one of HIST 259, HIST 267, HIST 328, or HIST 343.*

HIST 600 Senior Project I

A mandatory preparatory seminar for HIST 610. Students write a project proposal, develop an extensive bibliography, create a project outline, and present their research. The fundamentals of historical research and writing are also reviewed. Must be taken on a letter-grade basis. Credit: Two semester hours.

HIST 610 Senior Project II

A continuation of HIST 600. The student completes the research and writing and gives an oral defense of the Senior Project.

Sophomore Seminar

FSHIS*201, Communication in a Discipline

*History**

An exploration of oral and written communication with a focus on communication within a specific academic field. Students investigate the conventions of communication in the discipline and the methods by which practitioners position their work within larger disciplinary contexts. *Prerequisite: FS 102.* The course must be taken on a letter grade basis.

*The topical material covered in this sophomore seminar varies from section to section and year to year. Some sections of this course may have additional prerequisites.

Interdisciplinary Programs and Courses

Interdisciplinary programs provide students with the opportunity to pursue an integrative approach to their education and to identify and prepare themselves effectively for career paths that lie beyond the boundaries of traditional majors and minors. The goal of the Interdisciplinary programs is that the student not only be able to demonstrate a grounding in a particular discipline, but also to enter into larger conversations about the complex interactions among diverse fields of knowledge and expertise. Interdisciplinary approaches enable students to relate their more immediate academic concerns to a challenging multifaceted information society and therefore to address issues of citizenship and activism. Students who enroll in interdivisional majors or minors in most cases may complete any major or minor to satisfy the college requirement that the major or minor be in different divisions.

Specific requirements for the majors and minors below can be found in their respective sections of the *Academic Bulletin*. All interdisciplinary majors and minors are also interdivisional unless a specific division is listed for the program.

Interdisciplinary majors

- Biochemistry (Natural Science Division)
- Community and Justice Studies
- Environmental Science
- Environmental Studies
- Global Health Studies
- International Studies
- Neuroscience (Natural Science Division)
- Women's, Gender, and Sexuality Studies

Interdivisional minors

- Art and the Environment
- Black Studies
- Chinese Studies
- Classical Studies
- Community and Justice Studies
- Education Studies
- French Studies
- Global Health Studies
- Jewish Studies (Humanities Division)
- Journalism in the Public Interest
- Latin American and Caribbean Studies
- Medieval and Renaissance Studies
- Middle East and North African Studies
- Women's, Gender, and Sexuality Studies

Interdisciplinary (INTDS) Courses

This section contains the descriptions of interdisciplinary courses not listed elsewhere in the *Bulletin* under specific programs. These are non-departmental, non-divisional courses.

INTDS 130 Language, Culture and Society of Costa Rica

A component of the SFS Costa Rica Semester Field Studies program with two distinct but integrated modules. The Spanish language module offers listening, oral and written practice of the Spanish language at beginner, intermediate, and advanced levels of proficiency. Students engage grammar and vocabulary exercises, tools required for their research projects. The socio-culture module helps students develop a more refined understanding of Costa Rican culture and the

various communities with which they work. Students participate in lectures, field exercises, and other activities including a homestay. Credits: Two semester hours. (*Taught in Costa Rica.*)

INTDS 200 *Exploring Difference: A Multidisciplinary Inquiry*

An exploration of the question of difference: from biology to psychology, sociology, economics, religion, ecology, and political science. Fundamental to the inquiry is an investigation of what actually constitutes "difference" among various populations. Students critically interrogate the accepted normative categories of "normalization" in order to determine what social fictions function as regimes of truth on the one hand and create marginalization on the other. Our main focus is on exploring the possibility of creating a just society with difference as part of the context of community. Distribution Requirements: IP, PD.

INTDS 230 *Community Health Care: From Theory to Practice*

A study of key issues concerning community health care aimed at developing practical approaches to supporting patients. Students consider obstacles to effective health care as well as strategies for enabling at-risk patients to play more active roles in promoting their health and well-being. Topics include: challenges of delivering adequate health care in communities; population medicine; specific problems posed by diabetes, obesity, and cardiovascular disease; ethical dimensions of the concept of "underinsurance;" community medicine and the law; and methods of improving compliance and measuring outcomes. This seminar provides students with the academic foundation for a subsequent Health Coach Internship (INTDS 530) with the Meadville Medical Center. Credit: Two semester hours. *Prerequisite: Permission of the instructor.* Not open to first-year students. Distribution Requirements: CL, SB.

INTDS 240 *The Human Voice: An Interdisciplinary Study*

An investigation of the human voice through a broad range of disciplinary perspectives. Students consider the various manners in which voice use and the vocal apparatus are studied and understood by experts in anatomy, physiology, sociology, anthropology, acoustics, phonetics, psychology, history, marketing, education, and performing arts. Broad themes encourage students to integrate theoretical, experiential, and empirical viewpoints. Student observations of voice use, laboratory exercises in speech analysis, and creative final projects rely on firsthand consideration of the voice as a principal channel of human communication and expression. Distribution Requirements: QR, SP.

INTDS 310 *The Neuroscience of Music Comprehension*

An exploration of various processes employed in the comprehension and appreciation of music from an interdisciplinary perspective using various methods. Theoretical perspectives to be examined include a traditional music appreciation perspective, a psychological/perceptual perspective, and a neuropsychological perspective. The music appreciation perspective will emphasize the identification/recognition of various aspects of music such as rhythm, harmony, and theme in music composition, performance and listening. The perceptual aspects of music comprehension will be explored with classroom and laboratory demonstrations. Neural processing theories will be explored and demonstrated in the Music Department's new Niche Lab and through the use of electroencephalographic recordings from the brains of students as they listen to specific pieces of music presented in four different formats. The periodic sampling of brain activity during the presentation of specific musical pieces will be used to introduce neuropsychological concepts and theories about the importance of attention, hemispheric specialization and lateralization in music processing and memory in music comprehension. Distribution Requirements: HE, SP.

INTDS 311 *Neuroscience and the Visual Arts*

An interdisciplinary course that explores relationships between the visual arts and the nervous system. Contemporary neurological theories of visual perception that address phenomena such as color, depth, size, and movement are compared to elements used by visual artists (line, shape, color, space, perspective, motion, etc.). Experiments measure neurological activity stimulated by selected elements of visual form (line, shape, color). Other laboratory exercises measure viewers' brain activity to compare similarities and differences between artists and non-artists in the perception and creation of works of visual art. Information from these experiments may then be used in the creation of original works of visual art. *Prerequisites: NEURO 110, ART 285, or COMRT 285.* Distribution Requirements: HE, SP.

INTDS 312 *Neuroscience of Dance and Movement*

An interdisciplinary exploration of the various processes engaged during the experience and appreciation of dance practice and performance. This investigation focuses on neural processes underlying the psychosocial, kinesthetic, and expressive

dimensions of dance. Neural processing theories are explored in both neuroscience laboratories and dance studios using electrophysiological and digital imagery analysis. Dances are experienced and created with neural processing theories in mind. *Prerequisite: Permission of instructor.* Distribution Requirements: HE, SP.

INTDS 313 Neuroscience of Language and Communication

An interdisciplinary examination of the relationships between brain function and language acquisition, comprehension, and production. Contemporary neurological and linguistic theories of language development, production, and processing are applied to topics such as neural processing of multiple languages, manual languages, and neural events associated with spoken and sung words. Sex and age influences on language acquisition, comprehension, and production are explored. The organization and operation of the brain's communication systems are studied through clinical neurology cases as well as laboratory experiments to measure neural activity associated with production and comprehension of speech. The brain activity of multiple-language speakers is compared to those with single-language competence. Laboratory experiences may also explore the neural events associated with second language acquisition. Distribution Requirements: HE, SP.

INTDS 315 History of Neuroscience

A historical examination of the major advances made in understanding the brain and nervous system. The impact of important technical and theoretical breakthroughs in neuroscience research is explored from a cultural, historical, ethical, and health-related perspective. These factors are also examined in relation to current and future directions in neuroscience research, such as brain imaging techniques and research investigating the mechanisms and treatment of neurodegenerative diseases. *Prerequisites: NEURO 110 or HIST 380.* Distribution Requirements: HE, SP.

INTDS 415 Exploring Emotion

A study of humanistic and empirical approaches to understanding affect, emotion, and the passions. Beginning in the eighteenth century with philosophers and writers and moving into modern research, we integrate frameworks for conceptualizing how we express and regulate feeling. Literary sources include literary texts and genres from British Romanticism. Scientific sources begin with historical examinations of emotion and move into modern-day psychological and nonscientific work. Broadly, our study models interdisciplinary approaches to research and scholarship using a primarily discussion and lab-based format. Distribution Requirements: HE, SP.

INTDS 529 Internship: Interdisciplinary

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

INTDS 530 Internship in Community Health

An internship in community health care with the Meadville Medical Center (MMC). Using the academic and practical foundation provided in INTDS 230, interns work as "health coaches" in the local community under the guidance of MMC health care professionals. Through in-home visits or telephone interactions, health coaches work to educate and motivate at-risk patients to take an active and meaningful role in their health and well-being. Interns also participate in weekly meetings with MMC health care teams for case presentations, discussions, and planning. Not open to first-year students. Credit: Two semester hours. *Prerequisites: INTDS 230 and permission of the instructor.* May be repeated for credit.

International Studies

Professors Reeck (Chair)

International Studies is an interdivisional, liberal arts program that endeavors to develop and relate those analytical skills most appropriate for the examination of increasingly complex interactions among nations. It draws upon the disciplines of economics, history, modern languages, and political science. The principal goals of the major are: a) to develop understanding of the interrelationships of domestic and international politics and economic policies and of the implications of historical and sociological developments for those politics and policies; b) to provide students with tools and modes of analysis pertinent to these relationships; c) to help students think analytically in interrelated fields; and d) to help students understand different cultures.

Allegheny's long-established program in International Studies is designed to provide training for individuals who are considering careers in government service, international agencies, and international business and law. The program seeks to blend courses in the liberal arts, generally, with specific advanced courses in several relevant departments.

International Studies Learning Outcomes

Allegheny students who successfully complete a major in International Studies are expected to demonstrate the following competencies and skills:

- **Global Awareness Skills:** The Partnership for 21st Century Skills defines global awareness as “the ability to understand global issues; learn from and work with people from diverse cultures; and understand the cultures of other nations, including the use of non-English languages.” By taking courses in various disciplines (especially in the departments of History, Political Science, Modern Languages, and Economics), students are expected to demonstrate awareness of global issues.
- **Cultural Competency:** Students are expected to demonstrate knowledge of the culture of a foreign country through a semester-long study abroad program approved by the college. Cultural immersion would enable students to understand cultural aspects such as culinary habits, indigenous religions, political culture, family structures, values and ethics.
- **Regional Competency:** While being knowledgeable in global issues, students are also expected to demonstrate knowledge of a specific region. Upon graduation, an International Studies student will become a “specialist” in one of the following regions: Latin America, East Asia, Middle East and North Africa, or Europe. Competency could also be gained in other regions through a self-designed curriculum approved by the International Studies Steering Committee.
- **Foreign Language Competency:** Students are expected to be proficient in one of the following languages: Arabic, Chinese, French, German, or Spanish. Language competency will be demonstrated partly by the ability to undertake a senior project in a foreign language.
- **Research Capabilities:** Ability to undertake original, independent, and interdisciplinary research on an international topic. Students are expected to complete and defend a well-researched senior project by the end of their coursework.
- **Interpersonal Skills in a Global Context:** We expect International Studies students to be global citizens by developing the skills for interacting with people from different cultural, ethnic, socio-economic, and religious backgrounds.

The International Studies Major

The interdivisional major in International Studies leads to the Bachelor of Arts degree and requires the completion of a minimum of 54 semester credit hours. Because this major is interdivisional, students may complete any minor to satisfy the college requirement that the major and minor be in different divisions. International Studies majors must achieve an average GPA of at least 2.0 in all coursework presented for the major at graduation. All courses submitted for the major, except transfer credits, must be taken on the letter-grade basis. Normally no more than 16 transfer credits are accepted toward the major, and none of these may substitute for the Senior Project. Only the most recent grade is considered for courses that have been repeated.

The major in International Studies requires the successful completion of both a Junior or Senior Seminar and a Senior Project. A minimum of four courses (16 credit hours), in addition to the Seminar and Senior Project, must be taken at the 300-level or above. In addition, students must complete a semester of study abroad. Under normal circumstances, study abroad must be in a country where the focus language is spoken. Students must apply for off-campus study through the International Education office in the Allegheny Gateway and must meet all College requirements for study abroad, including maintaining a 2.75 minimum GPA. If a student is not accepted to study abroad in an Allegheny-sponsored program, s/he should consult with the International Studies Chair about other possibilities for completing the study abroad requirement for the major.

From the following, all majors must complete the required number of courses in each category. Double counting of courses between categories is not permitted.

1. Economics: ECON 101 *Introduction to Macroeconomics*

2. Theory (four courses, two from Economics, one each from Political Science and History):

- a. Economic Theory (**two** courses). Note: students who wish to use ECON 452 as one of these two courses should use Economics 201 as the other one, to be taken first. Certain sections of FSECO 201 may also be used to satisfy the Economics component of this requirement; consult the program Chair.
 - ECON 200 *Microeconomic Theory* or ECON 201 *Macroeconomic Theory* (ECON 201 is recommended)
 - ECON 251 *International Economics* (prerequisite: ECON 101 only)
 - ECON 256 *Economic Development* (prerequisite: ECON 101 only)
 - ECON 452 *Theory of Trade*
- b. Political Theory (**one** course):
 - POLSC 120 *Comparative Government and Politics*
 - POLSC 130 *World Politics*
 - POLSC 245 *Politics of Third World Development*
 - POLSC 450 *The Politics and Psychology of Persuasion and Prejudice*
 - POLSC 453 *Deterrence Theory and Nuclear Defense*
 - POLSC 457 *National Security Controversies*
 - POLSC 459 *Civil Wars*
- c. Historical Interpretation (**one** course). Note: certain sections of FSHIS 201 may also be used to satisfy this requirement; consult the program Chair.
 - HIST 300 *The Crusades*
 - HIST 303 *The Calamitous 14th Century*
 - HIST 306 *Enlightenment and Absolutism*
 - HIST 312 *State and Society under Communism and Fascism*
 - HIST 318 *Environmental Thought in Modern Europe*
 - HIST 365 *Conquest! Latin America 1492 –1600*
 - HIST 366 *Dictators and Development in Latin America*
 - HIST 367 *History of Political Crime and Political Justice*
 - HIST 380 *Disease and Medicine in Modern History*

3. Transnational and Global Issues (**two** courses):

- ECON 251 *International Economics*
- ECON 256 *Economic Development*
- ECON 421 *Strategic Environmental Management*
- ECON 452 *Theory of Trade*
- ENVSC 340 *World Regional Geography*
- ENVSC 350 *Ecological Economics*
- ENVSC 425 *Global Health Transitions*
- GHS 130 *Introduction to Global Health*
- GHS 370 *Medical Anthropology*
- HIST 380 *Disease and Medicine in Modern History*
- HIST 563 *The Atlantic World*
- POLSC 242 *Immigration and Citizenship*

- POLSC 245 *Politics of Third World Development*
- POLSC 251 *U.S. Foreign Policy*
- POLSC 261 *U.S.–Latin American Relations*
- POLSC 325 *Rights in Comparative Perspective*
- POLSC 450 *The Politics and Psychology of Persuasion and Prejudice*
- POLSC 453 *Deterrence Theory and Nuclear Defense*
- POLSC 457 *National Security Controversies*
- POLSC 459 *Civil Wars*

4. Area of Focus: four courses from **one** of the following regional areas: East Asia; Europe (General, France, Germany, or Spain); Latin America; or the Middle East and Northern Africa. Courses may be selected from the following list, and they may include those taken while studying abroad on a program approved by the International Studies program. At least two of these courses must be taken in the social science division, and one of the two social science courses must be a history course.

a. East Asia

- ART 223 *Far Eastern Art*
- CHIN 355 *Modern Chinese Literature in Translation*
- CHIN 385 *Contemporary Chinese Cinema*
- ECON 265 *The Economy of China*
- HIST 113 *The History of Modern East Asia, 1800–Present*
- HIST 165 *Pre-Modern China: Religion, Philosophy, and Society*
- HIST 167 *Modern China, 1800–2000*
- HIST 353 *Women and Revolution in China*
- HIST 355 *Modern Chinese Warfare*
- POLSC 228 *Government and Politics of China*
- POLSC 336 *Politics and Culture in the Asia-Pacific*
- POLSC 386 *Chinese Political Thought: From Confucius to the New Left*
- RELST 160 *Buddhism*
- RELST 165 *Zen Buddhism and Japanese Culture*
- RELST 170 *Religions of China*

b. Europe

Those selecting a regional focus in Europe may choose their four courses from any of those offered in subcategories i-iv.

i. Europe/General

- ART 111 *Art History Survey II*
- ART 231 *Art of the Northern Renaissance*
- ART 241 *19th-Century European Art: From Academy to Atelier*
- ART 247 *20th-Century Art: Images of the Avant-Garde*
- ART 249 *Art Since 1945: The Road to Modernism*
- HIST 105 *Europe in the Age of Popes and Princes, 476–1400*
- HIST 107 *Europe in the Age of Recovery and Reformation, 1400-1648*
- HIST 109 *Europe in the Age of Modernization and Revolution, 1648–1914*
- HIST 110 *Europe in the Age of Dictatorship and Democracy, 1914–Present*
- HIST 151 *History of Medieval England, 1066–1485*
- HIST 155 *The Soviet Century, 1917–Present*
- HIST 310 *Europe at the Turn of the Century, 1880–1917*
- HIST 312 *State and Society under Communism and Fascism*
- HIST 318 *Environmental Thought in Modern Europe*
- POLSC 226 *Government and Politics of Western Europe*
- POLSC 329 *Islam, Migration & Race in Western Europe*
- POLSC 427 *The European Union*

ii. France

- FRNCH 310 *From Romance to Revolution*
- FRNCH 320 *Romanticism, Realism, and Modernism*

- FRNCH 330 *"The Empire Writes Back"*
- FRNCH 370 *Writing and Society*
- HIST 157 *History of Modern France, 1789–Present*
- HIST 306 *Enlightenment and Absolutism*
- HIST 308 *French Revolution and Napoleon*
- iii. Germany
 - ART 231 *Art of the Northern Renaissance*
 - ART 236 *German Art from the Middle Ages to Today*
 - GERMN 305 *Advanced German in a Cultural Context*
 - GERMN 325 *German Culture*
 - GERMN 360 *Topics in German Culture*
 - HIST 159 *History of Modern Germany*
 - POLSC 327 *The Political System of Germany* (taught in Cologne)
- iv. Spain
 - SPAN 320 *Stories and Storytelling*
 - SPAN 330 *Topics in Hispanic Popular Culture*
 - SPAN 360 *Contesting Authority*
 - SPAN 385 *Introduction to Hispanic Culture through Film*
 - SPAN 420 *Nationalisms*
 - SPAN 430 *Race, Gender and Power*
 - SPAN 440 *Narrating Selves: Hispanic Literature in Contemporary Cultural Context*
 - SPAN 445 *Topics in Hispanic Film*
 - SPAN 485 *Hispanic Film, From Text to Screen*
- c. Latin America
 - HIST 116 *Colonial Latin America*
 - HIST 117 *Modern Latin American History*
 - HIST 169 *History of Mexico*
 - HIST 365 *Conquest! Latin America 1492–1600*
 - HIST 366 *Dictators and Development in Latin America*
 - POLSC 235 *Government and Politics of Latin America*
 - POLSC 261 *U.S.–Latin American Relations*
 - SPAN 320 *Stories and Storytelling*
 - SPAN 330 *Topics in Hispanic Popular Culture*
 - SPAN 360 *Contesting Authority*
 - SPAN 385 *Introduction to Hispanic Culture through Film*
 - SPAN 430 *Race, Gender and Power*
 - SPAN 440 *Narrating Selves: Hispanic Literature in Contemporary Cultural Context*
 - SPAN 445 *Topics in Hispanic Film*
 - SPAN 485 *Hispanic Film, From Text to Screen*
- d. Middle East and Northern Africa
 - ARAB 250 *Modern Arabic Novel in Translation*
 - ART 212 *Art of Ancient Egypt and the Mediterranean*
 - FRNCH 330 *"The Empire Writes Back"*
 - FRNCH 370 *Writing and Society*
 - HIST 300 *The Crusades* (counts toward the history course requirement for the major)
 - POLSC 232 *Government and Politics of the Middle East*
 - POLSC 354 *War and Peace in the Middle East*
 - POLSC 355 *The Arab-Israeli Conflict*
 - POLSC 459 *Civil Wars*
 - POLSC 587 *Seminar in Comparative Politics*
 - RELST 115 *Religion in the Ancient Near East*
 - RELST 120 *The Faith of Ancient Israel*

- RELST 140 *Islam: Faith, History, and Culture*
- RELST 144 *Modern Islamic Movements*
- RELST 147 *Judaism*
- RELST 171 *Islam and Other Religions*
- RELST 188 *Encountering the Other: Judaism's Relations with Christianity and Islam*
- RELST 215 *Marriage and Sexuality in Islam*
- RELST 222 *The Qur'an*
- RELST 226 *Religion, Education, and Gender in the Middle East and North Africa*
- RELST 229 *The Jewish Bible: How the Rabbis Read It*
- SOCAN 200 *Introduction to Cultural Anthropology*

5. An **approved seminar** in the Departments of Economics, History or Political Science. A list of approved seminars is provided on the International Studies web site.

6. A **Senior Project** (INTST 600 and INTST 610). The Senior Project is a joint effort involving the Departments of Economics, History, Modern and Classical Languages, and Political Science.

- **European and Chinese areas of focus:**
 - a. At least ten minutes of the oral defense of the Senior Project will be conducted in the foreign language selected.
 - b. European language speakers will present to the Department of Modern and Classical Languages a 15-page summary of the Senior Project written in the foreign language selected.
 - c. If Chinese is the foreign language, the length of the summary should be approximately 1,500 characters.
- **Middle East and Northern Africa (MENA) focus:**
 - a. Track One (see item #7 below): students will write a half-page summary in the regional language and a four-page summary in the European language. A short oral examination (approximately five minutes) will be conducted in the European language during the final oral defense.
 - b. Track Two (see item #7 below): students will write a 200-word (minimum) summary in the regional language and a short oral examination (approximately five minutes) will be conducted in that language during the final oral defense.

7. **Facility in a modern foreign language** at a level of skill acceptable to the Department of Modern and Classical Languages. In all cases, students are encouraged to consult with the Modern and Classical Languages Department faculty.

- **Students studying German, French or Spanish** must complete three courses at or above the 300-level in the language of focus. Language courses listed under the Area Studies category may be used to demonstrate this facility, which is also assessed through the use of the foreign language in the Senior Project and student performance in the Senior Project Oral Examination.
- **International Studies majors focusing on East Asia** should take at least five semesters of Chinese language courses, including one course at or above the 300-level. Studying abroad for one semester is counted as two semesters of language studies at Allegheny.
- **Students majoring in International Studies: Middle East and Northern Africa** must follow one of the two following tracks to demonstrate language facility:
- Take two courses in a non-European language spoken in the MENA region (e.g., Modern Standard Arabic, Persian, Hebrew, or Turkish). Allegheny College supports the study of Modern Standard Arabic. In addition, four courses must be taken in either French, German, or Spanish. If students opt to study four courses of European language, they are urged to consider which of the European languages fits their specific regional focus best.
- Take four courses in Modern Standard Arabic.

Any exceptions or exemptions to the requirements for the major must be approved by the program Chair.

International Studies Courses

INTST 529 *Internship: International Studies*

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

INTST 600 *Senior Project I*

Preparation of a senior project proposal: a thesis statement; a description of the project with special attention to the balance of the economic, historical, and political science aspects; and bibliography including foreign language sources. May only be taken on a Credit/No Credit basis. Credit: Two semester hours.

INTST 610 *Senior Project II*

Completion of the senior project, foreign language abstract, and oral defense. *Prerequisite: INTST 600.*

Jewish Studies

Professors French (Program Coordinator), Boynton, Kirschner, Krone, Pallant, Shapiro

A Humanities minor examining the religion, culture, and history of the Jewish people. Through this minor, students will gain an in-depth understanding of the experience and vital contributions of the Jewish people as an integral part of Western civilization and world history, and of Judaism as the matrix of the West's religious foundations and thought. The minor requires 20 credits and a GPA of at least 2.0 in the minor. Courses not on the list, such as those taken during study abroad, may be counted toward the minor with prior approval of the minor coordinators.

Jewish Studies Learning Outcomes

Students who successfully complete a minor in Jewish Studies should be able to:

- Discuss the history, texts, beliefs, and practices of the Jewish people;
- Explain the historical development of the Jewish people in various time periods and places;
- Analyze the intersections between Jews and the major political, social, and cultural developments that influenced their life and development;
- Analyze multiple sources of information (e.g., historical, literary, religious) that describe and seek to construct the Jewish experience.

The Jewish Studies Minor

The minor requires 20 credits and a GPA of at least 2.0 in the minor. Courses not on the list, such as those taken during study abroad, may be counted toward the minor with prior approval of the minor coordinators. At least two courses in the minor must be at the 300 level or above.

Requirements:

Foundation. Take: RELST 147 *Judaism*

Jewish Religion/Judaism. Take **two** of the following courses:

- CLC 111/RELST 111 *Biblical Hebrew*
- ENVSC 360/RELST 360 *Religion and Ecology*
- RELST 120 *The Faith of Ancient Israel*
- RELST 224 *Jewish Theology and the Holocaust*
- RELST 229 *The Jewish Bible: How the Rabbis Read It*
- RELST 341 *Jewish Ethical Perspectives*

Jewish Ethnic/Cultural/Historic Relations. Take **two** of the following courses:

- ENVSC 340 *World Regional Geography*
- RELST 188 *Encountering the Other: Judaism's Relations with Christianity and Islam*
- POLSC 232 *Government and Politics of the Middle East*
- POLSC 354 *War and Peace in the Middle East*
- POLSC 355 *The Arab-Israeli Conflict*

Jewish Studies Courses

JWST 529 Internship

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

Journalism in the Public Interest

Professors B. Slote (Program Coordinator), Branch, Hatch, Harward, Keeley, Mumme, Shapiro

Journalism in the Public Interest (“JPI”) is an interdivisional minor that combines practical training in journalism with an exploration of the evolving socio-political role journalism has played in the development of modern societies. The minor aims to foster an understanding of: 1) the notion that journalism is fundamental to the vitality of democracy and civil society in this country and globally; 2) the complexity of knowledge and assertions about knowledge as they pertain to the practice of journalism; 3) the relationships of power embedded in journalistic practice; 4) the historical development of journalism; and 5) what it means to be responsible citizens in a journalistic context—locally, nationally, and internationally.

Journalism in the Public Interest Learning Outcomes

Students who complete a minor in Journalism in the Public Interest should be able to:

- Write an effective hard-news story (write an effective lead, quote useful sources accurately, present pertinent information accurately, proofread meticulously, follow AP style);
- Demonstrate an understanding of the professional and ethical obligations of a working journalist;
- Edit a news story effectively;
- Create an effective piece of multimedia reporting;
- Articulate the ways in which a free press matters to a healthy democracy;
- Recognize how economic interests and power structures affect the nature of the news industry and how it represents the world;
- Follow the news habitually and critically.

The Journalism in the Public Interest Minor

The minor requires a minimum of 20 semester credit hours. Students must have at least a 2.0 GPA in the minor. The minor requires: two journalism synthesis courses; at least two applied journalism courses; and a third applied journalism course or a practicum.

Because this minor is interdivisional, students may complete any major to satisfy the college requirement that the major and minor be in different divisions.

Requirements (20 credits minimum):

1. Applied journalism courses. Take **both** of the following:
 - JOURN 100 *News Writing*
 - JOURN 300 *Multimedia Journalism*
2. Journalism in the Public Interest synthesis courses. Take **both** of the following:
 - JOURN 200 *Journalism and Democracy in the United States*
 - JOURN 550 *Jr Seminar: Exposé and Reform: Case Studies in Investigation*
3. Take **one** of the following three options:
 - JOURN 320 *Topics in Journalism*, **or**
 - JOURN 500 *Internship with The Meadville Tribune*
 - JOURN 501 *Internship with The Campus I*, **and** JOURN 502, *Internship with The Campus II*

For the purpose of fulfilling the college distribution requirement, JOURN 100, JOURN 300, and JOURN 320 count as Humanities courses. JOURN 200 counts as a Social Science course.

Journalism in the Public Interest Courses

JOURN 100 News Writing

A beginning level journalism class, with emphasis on the writing and gathering of news in an objective manner. Work often simulates the intense life of the news reporter – writing under short deadlines with extensive research requirements. Study

also stresses fundamental writing skills, such as developing concise language and learning to copy-edit and re-write. Distribution Requirements*: CL, ME.

**This course counts as Humanities for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

JOURN 200 Journalism and Democracy in the United States

An exploration of the history of journalism in the United States, its evolving relation to American democracy, and the particular challenges and opportunities that the current news media landscape presents for a responsible citizenry. Distribution Requirements*: CL, HE.

**This course counts as Social Science for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

JOURN 300 Multimedia Journalism

A study of the process of creating multimedia and news storytelling on the Web. Students develop knowledge of convergent journalism and the integration of video, audio, text, visuals, and interactive digital content with traditional journalistic storytelling norms. We also address social responsibility and ethical frameworks in new technology by integrating them in practice. Please note that this is not a class in Web design. *Prerequisite: JOURN 100 or permission of the instructor.* Distribution Requirements*: CL, ME.

**This course counts as Humanities for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

JOURN 320 Topics in Journalism

An advanced study of particular issues in journalism such as investigative reporting, editorial writing, and feature writing. Topics vary from year to year, but the class may be taken only once for credit. *Prerequisite: JOURN 100 or permission of the instructor.* Distribution Requirements*: CL, ME.

**This course counts as Humanities for the purpose of satisfying the College distribution requirement for students who matriculated before Fall 2016.*

JOURN 500 Internship with The Meadville Tribune

An internship that trains students as regular beginning reporters, working on either the day or night shift with The Meadville Tribune. Initially the student reporter is likely to write obituaries and other announcements; later the intern covers assignments with members of the regular reporting staff. If reliable, the student reporter may be asked to cover a special assignment and write feature stories. The intern may also do copy-editing and proofreading, as well as help with layout, in order to gain experience in the production areas of newspaper work. *Prerequisites: JOURN 100 and JOURN 200, one semester minimum of writing for The Campus, and approval of the liaison person and the managing editor of The Meadville Tribune.*

JOURN 501 Internship with The Campus I

An internship with *The Campus*, Allegheny's student newspaper, designed to provide experience working for a deadline-oriented, weekly publication for an audience of students, administration, faculty, and staff. Students can work in reporting, special projects, editing, photojournalism, production, or any combination thereof. Credit: Two semester hours. *Prerequisite: JOURN 100 or permission of the instructor.*

JOURN 502 Internship with The Campus II

An advanced internship with The Campus, Allegheny's student newspaper, designed to provide experience working for a deadline-oriented, weekly publication for an audience of students, administration, faculty, and staff. Students can work in reporting, special projects, editing, photojournalism, production, or any combination thereof. Credit: Two semester hours. *Prerequisites: JOURN 200 and JOURN 501, or permission of the instructor.*

JOURN 529 Internship: Journalism

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

JOURN 550 Jr Seminar: *Exposé and Reform: Case Studies in Investigation*

An exploration of the cultural work and real-world consequences of journalistic representation in an interdisciplinary context. The class is organized around investigative case studies—journalistic pieces that have exposed an unjust, criminal, or socially problematic situation and helped precipitate the remedy for that situation. Students' work in the class culminates in their own analytic and applied journalism projects. *Prerequisites: JOURN 100, JOURN 200, and permission of the instructor.*

Latin

Professors Herrman, Orttung

Allegheny College offers a minor in Latin and instruction in the Latin language through the department of Modern and Classical Languages. *See also the minor in "Classical Studies."*

Latin Learning Outcomes

Latin 110 and 120

Students:

- Learn the morphological and syntactical structure of the language;
- Acquire a basic vocabulary geared toward the texts commonly taught at the intermediate and advanced level.

Latin 215

Students:

1. Begin reading extensive selections of authentic Latin literature;
2. Practice parsing increasingly complex syntax;
3. Learn to use reference grammars and dictionaries;
4. Expand their vocabulary.

Latin 315

Students:

1. Consolidate and develop reading skills through exposure to a variety of different authors and genres;
2. Learn to analyze ancient writing as sophisticated literature;
3. Gaining speed and experience in reading;
4. Produce their own written analysis of the primary material they are reading in the original.

The Latin Minor

A minor in Latin requires a total of 20 semester hours. Students read widely in Roman literature in the original Latin, with more extensive specialized study of a few particular texts. Students who begin Latin at Allegheny take LATIN 110, LATIN 120, LATIN 215, and LATIN 315 twice. Students with high school experience should take the placement test and may start at the intermediate or advanced level, in which case they repeat LATIN 315 as many times as needed.

Latin Courses

LATIN 110 *Beginning Latin I*

An introduction to the morphology, grammar and syntax of the Latin language. Distribution Requirements: ME.

LATIN 120 *Beginning Latin II*

A continuation of Latin 110 with emphasis on syntax and advanced points of grammar. Reading in Latin prose. *Prerequisite: LATIN 110.* Distribution Requirements: HE, ME.

LATIN 215 *Intermediate Latin*

Designed to consolidate students' knowledge of grammar and to develop Latin reading skills. The course includes a comprehensive review of grammar and short readings of ancient prose and poetry of increasing length and complexity. *Prerequisite: LATIN 120 or placement exam.* Distribution Requirements: HE, ME.

LATIN 315 *Advanced Latin*

Specialized study of specific works of Latin literature. Students read extensive selections of ancient literature in the original with the goal of increasing reading speed and comprehension. Special emphasis is placed on stylistic analysis and literary

Latin

context. The specific texts change each year, and the course may be repeated. Authors studied may include: Caesar, Cicero, Livy, Lucretius, Ovid, Plautus, Tacitus, or Virgil. *Prerequisite: LATIN 215 or placement exam.* Distribution Requirements: HE, ME.

LATIN 529 Internship: Latin

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

LATIN 590 Independent Study

Latin American and Caribbean Studies

Professors Hernandez (Program Coordinator), Cabellero, Dantán, K. Haywood, Herrera de La Muela, Mattiace, Riess, N. Smith

A study of Latin America and the Caribbean that combines courses in the humanities, social sciences, and languages. In order to provide students a comparative view of the region through discipline-specific lenses, the 24 credits required for the minor must be completed in at least three departments. Because this minor is interdivisional, students may complete any major to satisfy the college requirement that the major and minor be in different divisions. The minor is administered by the Latin American and Caribbean Studies steering committee.

Learning Outcomes for Latin American and Caribbean Studies

Students who successfully complete a minor in Latin American and Caribbean Studies should be able to accomplish the listed goals in each of the following three areas:

1. *Values:*
 - Appreciate the diversity of values and beliefs that constitute different political traditions in the region;
 - Appreciate the value of examining the debates regarding the historical development of the region;
 - Value linguistic difference among the varieties of Spanish and the presence of indigenous languages in the region.
2. *Knowledge:*
 - Demonstrate an understanding of basic political institutions and processes of countries in the region;
 - Demonstrate a knowledge of key historical periods and figures in Latin American and Caribbean history;
 - Demonstrate a knowledge of the geography, basic traditions, and various cultural manifestations from the region.
3. *Skills:*
 - Engage in informed, literate conversations, both written and oral, regarding important political issues and historical debates in the region;
 - Demonstrate a mastery of skills in Spanish language at the intermediate level.

The Latin American and Caribbean Studies Minor

Requirements (24 credits):

1. 12 credits from the Social Science Division selected from the list below (a minimum of two departments must be represented, and at least two courses must be at or above the 300-level):
 - HIST 116 *Colonial Latin America*
 - HIST 117 *Modern Latin American History*
 - HIST 169 *The History of Mexico*
 - HIST 365 *Conquest! Latin America 1492–1600*
 - HIST 366 *Dictators and Development in Latin America*
 - HIST 577 *Inventing Mexico: Nationalism and National Identity in a Global Context*
 - POLSC 235 *Government and Politics of Latin America*
 - POLSC 242 *Immigration and Citizenship*
 - POLSC 261 *U.S.–Latin American Relations*
2. 12 credits from the Humanities Division selected from the following:
 - SPAN 110 *Beginning Spanish I*
 - SPAN 120 *Beginning Spanish II*
 - SPAN 130 *Accelerated Beginning Spanish*
 - SPAN 215 *Intermediate Spanish*
 - SPAN 220 *Issues in Contemporary Spanish and Spanish American Culture*
 - SPAN 225 *Hispanic Texts*
 - SPAN 230 *Imperial Cultures*
 - SPAN 245 *Spanish for Heritage Speakers*
 - SPAN 315 *Advanced Spanish Language Study*

Latin American and Caribbean Studies

- SPAN 320 *Stories and Storytelling*
- SPAN 330 *Topics in Hispanic Popular Culture*
- SPAN 360 *Contesting Authority*
- SPAN 385 *Introduction to Hispanic Culture through Film*
- SPAN 420 *Nationalisms*
- SPAN 430 *Race, Gender and Power*
- SPAN 440 *Narrating Selves: Hispanic Literature in Contemporary Cultural Context*
- SPAN 445 *Topics in Hispanic Film*
- SPAN 485 *Hispanic Film, From Text to Screen*

Latin American and Caribbean Studies Courses

LATCR 529 Internship: Latin American & Caribbean Studies

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

Mathematics

Professors Carswell (Chair), Barry, Dodge, Ellers, Hollerman, Lakins, Leech, Lo Bello, Lundberg, Weir, Werner

The Department of Mathematics offers a wide range of courses designed to introduce students to major areas of mathematical thought, formal reasoning processes, general methods of problem solving, applications of mathematics to diverse areas, the history of mathematics, and the effective communication of mathematics. Our courses emphasize the activity of thinking with ideas, as opposed to learning content by rote memorization. They develop the analytical and reasoning skills that not only prepare students to be mathematicians, but also serve students well no matter what they do in life. We strive to give students an appreciation for the culture of mathematics as revealed through its history, the beauty of its ideas, and its particular way of knowing, which sets mathematics apart from all other disciplines.

The Mathematics Placement Exam Policy: All entering students are required to take the Mathematics Placement Exam, with the following exceptions: students who transfer in college credit for Math 159, 160, 170, or 210; students who score four or five on the Advanced Placement AB calculus exam, and who report their score to Allegheny; students who score four or five on the Advanced Placement BC calculus exam, and who report their score to Allegheny; or students who score three on the Advanced Placement BC calculus exam with a four or five on the AB subscore of this exam, and who report their score to Allegheny.

Mathematics Learning Outcomes

Mathematics Major Learning Outcomes

Students who successfully complete a major in Mathematics are expected to:

- Achieve mastery of a rich and diverse set of mathematical ideas, with particular emphasis on the ideas of algebra and analysis;
- Achieve an understanding of mathematical abstraction and the nature of mathematical proofs, including the ability to read and write proofs;
- Communicate mathematics both orally and in writing;
- Think analytically and creatively to create mathematical models of real world problems, analyze them, and interpret the analysis.

Mathematics Minor Learning Outcomes

Students who successfully complete a minor in Mathematics are expected to:

- Achieve mastery of a diverse collection of mathematical ideas, including the ideas of calculus;
- Communicate mathematics both orally and in writing;
- Think analytically and critically to create mathematical models of real world problems, analyze them, and interpret the analysis.

Learning Outcomes for Mathematics Courses

Students who complete a course in the department of Mathematics are expected to

- A. Achieve the content learning outcomes for the course in which they are enrolled;
- B. Think analytically and critically, and adapt their mathematical knowledge to solve problems in new situations in both mathematics and other fields;
- C. Communicate mathematical information in written form.

The Mathematics Major

The major program in Mathematics leads to the Bachelor of Science degree and requires the completion of at least 43 semester hours of coursework numbered above MATH 160, including:

- MATH 170 *Calculus II*
- MATH 210 *Calculus III: Multivariate Calculus* (unless exempted through advanced placement)
- MATH 205 *Foundations of Mathematics* (should be completed by the end of the sophomore year)
- MATH 320 *Linear Algebra*

Mathematics

- MATH 325 *Algebraic Structures I*
- MATH 340 *Introduction to Analysis*
- MATH 585 *Junior Seminar*
- MATH 620 *Senior Project*

FSMAT 201 may be counted toward the major in Mathematics. No course may be taken on a Credit/No Credit basis for the major program in Mathematics. Transfer students majoring in Mathematics must complete at least 24 semester hours of Mathematics coursework at Allegheny.

CMPSC 230 (cross-listed as MATH 310) may be counted toward the major in Mathematics. A student who elects to include this course in the Mathematics major program may not also count it within a major or minor program in Computer Science.

The student can prepare for several career areas in the mathematical sciences. Below is a list of the areas followed by courses recommended by the Mathematics Department in addition to the required courses for the major:

- **Actuarial Mathematics:** MATH 345 and MATH 346, as well as coursework in Computer Science and mathematical economics.
- **Applied Statistics:** MATH 345, MATH 346, and MATH 365, and Computer Science courses in data structures, operating systems and computability.
- **Computational and Applied Analysis:** MATH 280, MATH 341, MATH 440, and PHYS 280, as well as strong work in the physical sciences.
- **Operations Research:** MATH 345, MATH 346, MATH 360, MATH 365, and MATH 440, as well as some work in Computer Science, including the study of data structures.
- **Pure Mathematics** (recommended for those who plan to do graduate study): MATH 315, MATH 330, MATH 341, MATH 350, MATH 400, MATH 425 and MATH 440.
- **Scientific Computing:** MATH 280 and PHYS 280; Computer Science courses in programming languages, data structures, parallel and vector processing, computer graphics, computer simulation and software design.
- **Teaching (secondary):** Students interested in pursuing teacher education in Mathematics should consult with the liaison to teacher education early in their academic careers to ascertain the current requirements for certification. Be aware that specific content requirements vary from year to year and by graduate school. Courses often required are MATH 205, MATH 210, MATH 220, MATH 280, MATH 320, MATH 325, MATH 330, MATH 345, and MATH 350. Courses in computer science also are often required.

Students in cooperative programs who want to major in Mathematics must complete a minimum of 39 credit hours of coursework numbered above Mathematics 160 and meet all the requirements for a major, as described above, except for MATH 620. At least 28 of the 39 semester hours required must be taken at Allegheny. Students in cooperative engineering programs are required to take MATH 280. Students in cooperative programs who want to minor in Mathematics must meet the requirements for a minor listed below.

Each Mathematics major, whether concentrating in applied mathematics or not, should be familiar with applications of mathematics to at least one other field. For this reason, the Department of Mathematics strongly recommends that majors pursue a sequence of three or more courses in at least one of the following departments: Biology, Chemistry, Computer Science, Economics, Geology, or Physics.

Mathematics majors are required to have a GPA of at least 2.0 in Mathematics at graduation. All Mathematics courses taken at Allegheny having a number higher than 159 must be taken on a letter-grade basis and are included in the calculation. In the case of repeated courses, only the most recent grade is included.

Normally, the Department of Mathematics will only award the honor citation in Mathematics to students who have completed at least four courses in Mathematics numbered between MATH 250 and MATH 500 (including CMPSC 230); at least one course must be selected from among MATH 400, MATH 425, and MATH 440.

The Mathematics Minor

The minor in Mathematics requires at least 20 semester credit hours of Mathematics at the 170 level or higher. At least four semester hours must include a course numbered 300 or above. FSMAT 201 may be counted toward the minor in Mathematics. CMPSC 230 (cross-listed as MATH 310) may be counted toward the minor in Mathematics. A student who elects to include this course in the Mathematics minor program may not also count it within a major or minor in Computer Science.

All Mathematics courses taken at Allegheny having a number higher than 159 must be taken on a letter-grade basis and are included in the GPA calculation for the minor. In the case of repeated courses, only the most recent grade is included.

Mathematics Courses

MATH 110 *Elementary Mathematical Modeling*

An algebra-based elementary modeling course. Linear, polynomial, exponential, and logarithmic functions are studied from numerical, graphical, and analytical points of view. The emphasis is on modeling real-world problems and rates of change. May not be taken for credit if credit for any calculus course has already been received. Does not count toward a major or minor in mathematics. Distribution Requirements: QR.

MATH 135 *Elementary School Mathematics*

An examination from a college perspective of mathematical topics related to the elementary school curriculum with an emphasis on development of problem-solving strategies. Mathematical concepts, their history, and their connections to the real world are studied. The course is intended for students who are seeking certification for elementary school teaching. *Prerequisite: Permission of the instructor.*

MATH 157 *Calculus I for Social/Life Sciences*

An introduction to the differential calculus of algebraic, logarithmic, and exponential functions. The emphasis is on the concept of the derivative and applications of calculus to the life and social sciences. Precalculus topics are covered as needed. May not be taken for credit if credit for any calculus course has already been received. Does not count toward a major or minor in mathematics. Distribution Requirements: QR.

MATH 158 *Calculus II for Social/Life Sciences*

A continuation of the study of differential calculus begun in MATH 157 and an introduction to integral calculus and the multivariate calculus involving algebraic, logarithmic, and exponential functions. In addition to further applications of the derivative, the concepts of the integral of a function of one variable and differentiation of multivariable functions are applied to the life and social sciences. Precalculus topics are covered as needed. May not be taken for credit if credit has been received for MATH 160. Does not prepare students for MATH 170, and does not count toward a major or minor in mathematics. *Prerequisite: Completion of MATH 157 with a grade of "C" or better.* Distribution Requirements: QR.

MATH 159 *Precalculus*

A study of the mathematical concepts which are a prerequisite to the study of calculus: functions, domains, ranges, graphs, equations, and inequalities. Specific functions include algebraic, exponential, logarithmic, and trigonometric functions. The purpose is only to prepare students to take MATH 160 *Calculus I*. May not be taken for credit if credit for any calculus course has already been received. Does not count toward a major or minor in mathematics or toward the College Distribution Requirements. *Prerequisite: Permission of instructor is required.*

MATH 160 *Calculus I*

A study of real numbers, functions, limits, continuity, differentiation, and integration. All entering students planning to enroll in this course must take the Mathematics Placement Examination. *Prerequisite: Placement in the course based on the student's performance on the Mathematics Placement Exam or completion of MATH 159 with the grade of "C" or better.* Students who have received credit for MATH 158 will not receive credit for MATH 160. Four 50-minute lectures per week. Distribution Requirements: QR.

MATH 170 Calculus II

A study of the applications of the definite integral; logarithmic, exponential, and trigonometric functions; techniques of integration; sequences and series; and indeterminate forms. Students completing MATH 170 with less than a “C” grade must request permission of the instructor to enroll in subsequent courses in mathematics. *Prerequisite: Completion of MATH 160 with the grade of “C” or better, or transfer or AP credit for MATH 160.* Four 50-minute lectures per week. Distribution Requirements: QR.

MATH 205 Foundations of Mathematics

An introduction to concepts encountered in the study of abstract mathematics. Topics covered include logic, mathematical proofs, set theory, relations, functions, mathematical induction, and introductory number theory. The concepts of injectivity, surjectivity, and inverses are discussed as well as elementary computational tools such as the Division Algorithm and Euclid’s algorithm for the greatest common divisor. Additional topics may include cardinality, combinatorics, graph theory, algebraic structure, the real number system, and concepts of mathematical analysis. It is recommended that a major complete this course before the end of the sophomore year. *Prerequisite: Completion of MATH 160 with a grade of “C” or better and sophomore standing, or permission of instructor.* Distribution Requirements: ME, SP.

MATH 210 Calculus III: Multivariate Calculus

A study of two- and three-dimensional vectors, vector-valued functions continuity and differentiation of functions of several variables, multiple integration, and line integrals. *Prerequisite: Completion of MATH 170 with the grade of “C” or better, or transfer or AP credit for MATH 170.* Four 50-minute lectures per week. Distribution Requirements: QR.

MATH 220 The History of Mathematics

A survey of the progress of mathematics from ancient to modern times. Attention is given to the philosophy of mathematics and to the bearing of mathematics on other branches of knowledge. *Prerequisite: MATH 210 with a grade of C or better, or permission of instructor.* Distribution Requirements: HE.

MATH 280 Ordinary Differential Equations

An examination of methods of solving ordinary differential equations with emphasis on the existence and uniqueness of solutions of first order equations and second order linear equations. Topics may include Laplace transforms, systems of linear differential equations, power series solutions, successive approximations, linear differential equations, and oscillation theory with applications to chemistry and physics. *Prerequisite: MATH 210 with a grade of C or better, or permission of instructor.* Distribution Requirements: SP.

MATH 310 Theory of Computation and Formal Languages (also listed as CMPSC 230)

An introduction to the theories of finite-state machines, pushdown automata and Turing machines as well as the relation between automata and the formal languages they recognize. Students explore computational theory and its practical applications in lexical analysis and language parsing. *Prerequisites: MATH 205 with a grade of C or better and CMPSC 112, or permission of instructor.* Offered in alternate years. Distribution Requirements: QR, SP.

MATH 315 Introduction to Mathematical Logic

An introduction to symbolic logic as a mathematical model of deductive thought. Topics covered include propositional logic, models, formal proofs, and the Completeness, Compactness, and Incompleteness Theorems. Additional topics from Computability theory or set theory may be included. *Prerequisite: MATH 205 with a grade of C or better, or permission of instructor.* Distribution Requirements: SP.

MATH 320 Linear Algebra

A study of vector spaces, linear transformations, matrices, determinants, systems of linear equations, similarity, and characteristic values and vectors. This course may be applied toward the Mathematics requirement for a Computer Science major. *Prerequisite: MATH 205 with a grade of C or better, or MATH 210 with a grade of C or better, or permission of instructor.* Distribution Requirements: SP.

MATH 325 Algebraic Structures I

An introduction to the notion of an algebraic structure concentrating on the simplest such structure, that of a group. Rings and fields are also discussed. *Prerequisites: MATH 205 and MATH 320, each with a grade of C or better, or permission of instructor.* Distribution Requirements: SP.

MATH 330 Number Theory

A study of divisibility properties of integers, linear diophantine equations, the theory of congruencies, the Euler-Fermat Theorem, perfect numbers, elementary results on the distribution of prime numbers, quadratic residues and some non-linear Diophantine problems. *Prerequisite: MATH 205 with a grade of C or better, or permission of instructor.* Distribution Requirements: SP.

MATH 340 Introduction to Analysis

An examination of the theory of calculus of a single variable. Topics include properties of the real numbers, topology of the real line, and a rigorous treatment of sequences, functions, limits, continuity, differentiation and integration. *Prerequisites: MATH 205 and MATH 210, each with a grade of C or better, or permission of instructor.* Distribution Requirements: SP.

MATH 341 Functions of a Complex Variable

A study of differentiation and integration with complex variables, conformal representation, and the calculus of residues, with applications to geometry and physics. *Prerequisites: MATH 205 and MATH 210, each with a grade of C or better, or permission of instructor.* Distribution Requirements: SP.

MATH 345 Probability and Statistical Inference I

A study of mathematical models, sample space probabilities, random variables, expectation, empirical and theoretical frequency distributions, moment generating functions, sampling theory, correlation and regression. This course may be applied toward the Mathematics requirement for a major in Computer Science. *Prerequisite: MATH 210 with a grade of C or better, or permission of instructor.* Distribution Requirements: SP.

MATH 346 Probability and Statistical Inference II

A continuation of Mathematics 345 treating the testing of hypotheses and goodness of fit, small sample techniques, statistical design, non-parametric methods and sequential analysis. *Prerequisite: MATH 345 with a grade of C or better, or permission of instructor.* Distribution Requirements: SP.

MATH 350 Geometry

An introduction to modern geometry. Topics may be drawn from axiomatic, projective, affine or hyperbolic geometry. Related topics at the discretion of the instructor. *Prerequisite: MATH 205 with a grade of C or better, or permission of instructor.* Distribution Requirements: SP.

MATH 360 Graph Theory

An introduction to the theory of undirected and directed finite graphs. Topics include the Königsberg Bridge Problem, planar and non-planar graphs, the five-color theorem and the four-color theorem, Hamiltonian circuits, shortest path algorithms, and problems of network flow. This course may be applied toward the Mathematics requirement for a major in Computer Science. *Prerequisite: MATH 205 with a grade of C or better, or permission of instructor.* Distribution Requirements: SP.

MATH 365 Combinatorics and Discrete Models

The study of topics from combinatorics and discrete mathematical models including the pigeonhole principle, permutations and combinations of finite sets and multisets, binomial and multinomial coefficients, the inclusion-exclusion principle, recurrence relations, and generating functions. This course may be applied toward the Mathematics requirement for a major in Computer Science. *Prerequisite: MATH 205 with a grade of C or better, or permission of instructor.* Distribution Requirements: SP.

MATH 400 Topology

A study of topological spaces and continuous maps, separation axioms, compactness, metric spaces, product spaces, connectedness and fixed point theorems. Proof techniques are emphasized. The course material ties together some ideas

Mathematics

presented in the basic Mathematics courses. *Prerequisite: MATH 340 with a grade of C or better, or permission of instructor.* Distribution Requirements: SP.

MATH 425 Algebraic Structures II

A study of rings and fields, including integral domains, polynomial rings, ideals, homomorphisms, and irreducibility of polynomials over prime fields. Other topics may include unique factorization domains, Euclidean domains, extension fields, automorphisms of fields and Galois theory, additional algebraic structures, or advanced topics in group theory. *Prerequisite: MATH 325 with a grade of C or better, or permission of instructor.* Distribution Requirements: SP.

MATH 440 Real Analysis

An extension of the material introduced in MATH 340. Topics may include sequences and series of functions, uniform convergence, power series and Taylor's theorem, the topology of Euclidean space, the foundations of the calculus of several variables, the implicit function theorem, the inverse function theorem, and the Lebesgue integral. *Prerequisite: MATH 340 with a grade of C or better, or permission of instructor.* Distribution Requirements: SP.

MATH 529 Internship: Mathematics

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

MATH 585 Junior Seminar

Seminar discussion of selected topics in mathematics. Students read and present articles from mathematical journals and conduct preliminary research on potential senior project topics. The writing and presentation of mathematics is emphasized. *Prerequisite: MATH 205 with a grade of C or better, or permission of instructor.*

MATH 590 Independent Study

Credit: Variable.

MATH 620 Senior Project

The student completes research and writing for the Senior Project and gives an oral defense. *Prerequisite: Permission of instructor.*

Sophomore Seminar

FSMAT 201 Communication in a Discipline

*Mathematics**

An exploration of oral and written communication with a focus on communication within a specific academic field. Students investigate the conventions of communication in the discipline and the methods by which practitioners position their work within larger disciplinary contexts. *Prerequisite: FS 102.* The course must be taken on a letter grade basis.

*The topical material covered in this sophomore seminar varies from section to section and year to year. The seminar highlights how the software package LaTeX can aid effective written and oral communication in Mathematics. FSMAT 201 counts as an elective toward the major or minor in Mathematics; the prerequisite for FSMAT 201 is satisfactory completion of Math 160 (grade of "C" or better).

Medieval and Renaissance Studies

Professors Holland (Program Coordinator), Bulman, Carr, Hellwarth, and Palmer

Medieval and Renaissance Studies, an interdivisional minor that examines the culture, religion, art, and literature of the medieval and Renaissance period in Western Europe, is intended to foster a sympathetic understanding of an age very different from our own, as well as a better sense of the roots of the modern era. 24 credits are required for the minor. A minimum of eight credits each must be in the Social Sciences and the Humanities divisions. Students must have a GPA of at least 2.0 in the minor. Courses not on the list, such as those taken during study abroad, may be counted toward the minor with prior approval of the minor coordinator. Because this minor is interdivisional, students may complete any major to satisfy the college requirement that the major and minor be in different divisions.

Medieval and Renaissance Studies Learning Outcomes

Students who complete the Medieval and Renaissance Studies minor are expected to be able to:

- Understand, explain, and critique the processes, forces, and events through which medieval culture emerged from late ancient culture in Western Europe, as well as the processes, forces, and events through which early modern culture emerged from medieval culture;
- Understand, explain, and critique the complex interrelationships among issues of regional, national, and international politics, concepts of secular and religious power, and prevailing ideals defining human behavior during the medieval and early modern periods in Western Europe;
- Understand, explain, and critique changing perceptions of the human individual and his or her relationship to the larger human community and to God, as expressed in works of art, in literature, and in cultural interaction typical of the medieval and early modern periods in Western Europe;
- Understand, explain, and critique representative works of art and literature from the medieval and early modern period in Western Europe.

The Medieval and Renaissance Studies Minor

Requirements (24 credits):

1. Take **one** of the following:
 - MEDRN 180 *1189: Conflict and Creativity in the Time of the Third Crusade*
 - MEDRN 181 *1381: Princes and Paupers*
 - MEDRN 182 *1600: The Man-Made Self*
2. Take **three** of the following courses, including courses in at least two different departments:
 - ART 215 *Medieval Art: Glorious Visions*
 - ART 225 *Art of the Italian Renaissance*
 - ART 231 *Art of the Northern Renaissance*
 - ENGL 201 *Studies in Early British Literature*
 - ENGL 212 *Shakespeare* (prerequisite: ENGL 110 *Reading Literature*)
 - HIST 105 *Europe in the Age of Popes and Princes, 476–1400*
 - HIST 107 *Europe in the Age of Recovery and Reformations, 1400–1648*
 - HIST 151 *History of Medieval England, 1066–1485*
 - MUSIC 104 *Music of the Renaissance*
 - PHIL 230 *Science in Its Cultural Setting* (prerequisite: one course in philosophy or one course in natural science, or permission of the instructor)
 - RELST 250 *Medieval and Reformation Christianity*
3. Take **two** of the following courses, including courses in two different departments:
 - ART 330 *The Renaissance Woman* (prerequisite: 200-level Art History course or instructor's permission)
 - ENGL 311 *Chaucer* (prerequisite: ENGL 110 *Reading Literature*; ENGL 201 recommended)
 - ENGL 385 *Cultural History of the English Language* (prerequisite: ENGL 110 *Reading Literature*, one of ENGL 201–ENGL 204)

- ENGL 415 *Topics in Literature of the Middle Ages* (prerequisite: ENGL 110 *Reading Literature* and one of ENGL 201–ENGL 204 [ENGL 201 recommended])
- ENGL 425 *Topics in Renaissance Literature* (prerequisite: ENGL 110 *Reading Literature* and one of ENGL 201–ENGL 204)
- ENGL 426 *Topics in Shakespeare* (prerequisite: ENGL 110 *Reading Literature* and one of ENGL 201–204)
- HIST 300 *The Crusades*
- HIST 301 *Chivalry*
- HIST 303 *The Calamitous 14th Century*
- HIST 305 *The Italian Renaissance*

Medieval and Renaissance Studies Courses

MEDRN 180 1189: *Conflict and Creativity in the Time of the Third Crusade*

An interdisciplinary, team-taught examination of a “slice of life” in the year 1189. This introductory class focuses on the events surrounding the Third Crusade by examining documentary texts (literature, artwork, medicine, law) in their historical, religious, and social context, including the ways that Arabic and European cultures were both at odds and in concert in such areas as medicine, art, and literature. Students develop critical and analytical skills through reading, writing about, and discussing significant texts and artworks that emerged from Arabic and European cultures and their contact. Distribution Requirements: HE, IP.

MEDRN 181 1381: *Princes and Paupers*

An interdisciplinary, team-taught examination of a “slice of life” in the year 1381. This introductory class focuses on the events surrounding the Peasants’ Revolt by examining documentary texts (literature, artwork, medicine, law) in their historical, religious, and social context. We explore the social consequences of the Black Death, class struggle, princely privilege, heretical movements, and women’s roles. Students develop critical and analytical skills through reading, writing about, and discussing significant texts and artworks that have defined the culture of the late 14th century. Students also learn the methodologies appropriate to such interdisciplinary study. Distribution Requirements: HE, IP.

MEDRN 182 1600: *The Man-Made Self*

An exploration of the emerging sense of subjectivity and individuality in the Early Modern period, culminating in the year 1600. We study the challenges to medieval notions of social class and economic hierarchies, gender and sexuality, and Church authority as well as the new political pragmatism, burgeoning interest in classical civilizations and humanist education, and new theories of knowledge. Drawing from material across various disciplines and cultures from all over Europe, we explore how a new conception of selfhood – a man-made self – emerged from challenges to traditional social and political structures and from the shattering of traditional beliefs and ways of knowing. Distribution Requirements: HE, IP.

MEDRN 529 *Internship: Medieval & Renaissance Studies*

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

Middle East and North African Studies

Professors Hilal (Program Coordinator), Asmi, Holland, Kirschner, Krone, Mirza, Onyeiwu, Reeck

An interdivisional minor examining the history, politics, religion, culture, and economics of the Middle East and North Africa (“MENA”). Through this minor, students will gain an in-depth understanding of the region and the contexts through which we understand it. *See also the Middle East and Northern Africa track in the “International Studies” major.*

Middle East and North African Studies Learning Outcomes

Students who successfully complete a minor in Middle East and North African studies will be able to:

- Recognize the historical, cultural, social, and political traditions that influence the Middle East and North Africa;
- Understand how to counteract reductionist and ethnocentric estimations of the peoples of the Middle East and North Africa;
- Locate, critically analyze, interpret, and discuss cultural and religious texts and political and social forces;
- Express and apply concepts and knowledge to engage in informed conversations about important issues related to the region;
- Apply skills, knowledge, and nuanced perspectives that are necessary for effective global citizens actively engaging in an increasingly interconnected world.

The Middle East and North African Studies Minor (“MENA”)

The minor in Middle East and North African (“MENA”) Studies is an interdivisional program examining the history, politics, religion, culture, and economics of the region. Through this minor, students will gain an in-depth understanding of the MENA region and the contexts through which we understand it. In order to provide students a comparative view of the region through multiple disciplines, the required coursework must be distributed among religious, language, cultural, and social science approaches. Two of these courses must be at or above the 300 level, and students must have at least a 2.0 GPA in the minor. Students petitioning to include classes not listed below must provide a course syllabus. The minor requires a minimum of 24 semester credit hours, and no more than 8 credits of foreign language study may be included in the 24-credit minimum.

Because this minor is interdivisional, students may complete any major to satisfy the college requirement that the major and minor be in different divisions.

When appropriate, other courses – for example, courses taken during study abroad – may be substituted for any of the requirements. All substitutions of alternatives for required courses must be approved by the minor coordinator, and students are strongly encouraged to discuss any potential course substitutions prior to enrolling in the course.

Requirements (24 credits). Courses marked with an asterisk (*) have prerequisites.

1. Introductory Survey (4 credits). Take **one** of the following:

- POLSC 232 *Government and Politics of the Middle East*
- RELST 144 *Modern Islamic Movements*

2. Language requirement (8 credits).

Students must demonstrate proficiency in Arabic equivalent to one year of college-level study as demonstrated by the successful completion of eight credits of Arabic. *With the approval of the minor coordinator, transfer credit in a regional language (e.g., Arabic, Hebrew, Kurdish, Turkic languages, Persianate languages) may be used to satisfy this requirement.*

3. Religion and Culture requirement (4 credits). Take **one** of the following:

- ARAB 250 *Modern Arabic Novel in Translation*
- ART 212 *Art of Ancient Egypt and the Mediterranean*
- FRNCH 330* *“The Empire Writes Back”*
- FRNCH 370* *Writing and Society*
- RELST 115 *Religion in the Ancient Near East*
- RELST 120 *The Faith of Ancient Israel*

Middle East and North African Studies

- RELST 140 *Islam: Faith, History, and Culture*
 - RELST 147 *Judaism*
 - RELST 171 *Islam and Other Religions*
 - RELST 188 *Encountering the Other: Judaism's Relations with Christianity and Islam*
 - RELST 215 *Marriage and Sexuality in Islam*
 - RELST 222 *The Qur'an*
 - SOCAN 200 *Introduction to Cultural Anthropology*
4. **Social and Political Contexts requirement (4 credits).** Take **one** of the following:
- ENVSC 340 *World Regional Geography*
 - HIST 300* *The Crusades*
 - POLSC 232 *Government and Politics of the Middle East*
 - POLSC 354* *War and Peace in the Middle East*
 - POLSC 355* *The Arab-Israeli Conflict*
 - POLSC 459* *Civil Wars*
 - POLSC 587* *Seminar in Comparative Politics*
 - RELST 144 *Modern Islamic Movements*
 - RELST 226 *Religion, Education, and Gender in the Middle East and North Africa*
5. **Electives.** Take additional courses from among those listed above to bring the total credits for the minor to at least 24.

Middle East and North African Studies Courses

MENA 529 Internship: Middle East & North African Studies

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

Modern and Classical Languages

Professors Riess (Chair), Ensberg, Dantán, Hernández, Herrera de La Muela, Herrman, Hilal, Lewis, Ludewig, Orttung, Reeck, Shi, N. Smith, P. Wolfe

Foreign language study is widely recognized as both a practical and intellectually stimulating way for students to broaden their knowledge and understanding of the world around us and to build a strong foundation of skills in oral and written communication. By engaging with speakers of other languages, and by exploring other cultures through literature and other media, Allegheny students learn to think more critically and creatively about language itself and cultural debates in different parts of the world as they prepare themselves for careers in the increasingly global marketplace or for advanced studies in literature or language.

The department offers majors and minors in French, German, and Spanish and minors in Chinese, Classical Studies, and Latin. Course placement for those with previous study is based upon achievement tests or examinations administered at the time of entry. Exemptions to the placement test results will be based on individual consultation with the instructor. Other languages are available through the Center for Language and Culture (see below).

The department favors an integrated approach to language learning at the advanced level. While historical, political and cultural information become increasingly important, structural and grammatical components remain crucial so that students gain the necessary tools for solving problems of understanding and expression encountered in the discipline and for achieving a high level of proficiency in the language.

Among courses involving the sequential buildup of language skills, credit cannot be earned in a less advanced course after successful completion of one at a higher level without the permission of the Department.

Proficiency in a foreign language is an integral part of the International Studies Program; please see the “International Studies” section of this *Bulletin* for details.

Study Abroad

Students learning a foreign language are urged to spend a semester or preferably a year abroad. The College sponsors several distinct study-abroad programs that are open to all qualified Allegheny students and to which Allegheny financial aid may be applied; see the “Study Away” section of this *Bulletin* for details. The following study-away programs offer instruction in the languages and cultures taught in the Modern and Classical Languages department:

- **Arabic:** Al Akhawayn University in Ifrane, Morocco
- **Chinese:** Allegheny-sponsored CIEE programs in Beijing, Nanjing, and Shanghai
- **French:** Boston University, Paris Internship Program, France; L’Université Catholique de l’Ouest in Angers, France; Minnesota Studies program in Dakar, Senegal
- **German:** University of Cologne, Germany
- **Spanish:** CIEE Study Center at FLACSO in Buenos Aires, Argentina; Minnesota Studies program in Quito, Ecuador; ITESM Campus, Querétaro, Mexico; CCCS Program in Seville, Spain

Learning Outcomes for Modern Languages

The curriculum of the Department of Modern & Classical Languages is designed to build proficiency and understanding in three major areas:

- Communication and practical use of language
- Mastery of structural components and cognitive elements of language;
- Literary and cultural dimensions of language.

We believe that a successful liberal arts curriculum should integrate these three areas of focus at all levels. While practical communication and mastery of linguistic structures are essential, the trademark of language learning within the context of the liberal arts is its focus on the interdependence of language and culture. This interdependence is reflected in the inherent connections between language and the intellectual history of the various countries and regions where each

language is spoken and in the expression of contemporary cultural values. We have outlined below the general principles that are common to the curricula of all sections within the department.

There are a variety of teaching methods and styles used in our courses by the individual sections, but all can be called communicative and conceptual. We do not embrace one particular method, but all methods used rely heavily on communication and on using culture as a context for that communication. At the lower levels, more concrete examples of cultural usage are emphasized, and these contexts become more complex as students progress. Another common principle seen in all sections is a renewed focus on culture at the more advanced levels. In the recent past, culture has become more broadly defined to include not only high culture, primarily literary texts in our discipline, but also cultural history, intellectual history and other manifestations of cultural values, arts such as cinema, and political institutions. Literature is increasingly taught within this broader cultural context which may highlight interrelations between the arts and other aspects of cultural history.

In our most advanced courses, such as senior seminars and the senior project, we expect students to practice the integration of these three types of skills and knowledge. As in other disciplines, students are expected to study, research, and analyze abstract problems and to think critically about their reading. At the same time, they are communicating and manipulating linguistic structures at an advanced level and learning abstract concepts related to the culture of their target language.

The Senior Project is the capstone experience for every major. A successful thesis requires extensive research, demonstration of all language skills, critical analysis, organization, and effective argumentation. Language majors must submit a thesis of at least 30 pages; for double majors, the foreign language component of the thesis must be at least 20 pages. We continue to see the senior project and its oral defense as a means of demonstrating mastery of all of the skills and knowledge acquired during the student's undergraduate career.

The final principle shared by all sections in the department is the importance of study abroad. The linguistic and cultural immersion provided by this experience greatly enhances the acquisition of linguistic competence and is essential to gaining a real understanding of a different culture. Professors in each language have worked to create programs with easily transferrable courses that speak directly to our majors.

The following summary outlines the learning outcomes for cognitive, cultural, and language proficiency expected from first-year students, second-year students, minors, and majors in the Modern and Classical Languages Department.

Modern Languages Learning Outcomes for First-Year Students

1. Language proficiency according to guidelines from the American Council on the Teaching of Foreign languages (ACTFL) after first year of instruction:
 - Reading: Intermediate-Mid
 - Listening: Intermediate-Mid
 - Writing: Intermediate-Low
 - Speaking: Intermediate-Low
2. Cognitive and cultural proficiency of countries and regions where target language is spoken:
 1. Basic knowledge of the geography of the country or countries being studied
 2. Specific knowledge of several different regions and their distinctive characteristics
 3. Familiarity with the country or countries where the target language is spoken
 4. Concrete aspects of contemporary culture, such as cultural differences related to food, meals, university life, family life, holidays, celebrations, travel, monetary systems, leisure activities, etc.
 5. Ways people act and react differently in relating to other people. Examples include expectations when dealing with merchants, government employees, etc
 6. Initial exposure to emblematic cultural personalities and artifacts

Modern Language Learning Outcomes for Second-Year Students

1. Language proficiency according to ACTFL guidelines after second year of instruction:
 - Reading: Intermediate-High
 - Listening: Intermediate-High

- Writing: Intermediate-Mid
- Speaking: Intermediate-Mid
- 2. Cognitive and cultural proficiency of countries and regions where target language is spoken:
 - Increasing knowledge and detail in the areas listed for first year students
 - A rudimentary knowledge of societal and government institutions
 - Some knowledge of other historical periods
 - Knowledge of some specific literary texts from different genre and their cultural and historical context
 - Some ability to analyze and interpret basic literary texts

Learning Outcomes for Minors in Modern Languages

- Expected language proficiency according to ACTFL guidelines for a student who completes a minor:
- 1. Speaking: Intermediate-Mid to Intermediate-High
- 2. Listening: Intermediate-High to Advanced
- 3. Reading: Advanced
- 4. Writing: Intermediate-High to Advanced
 - Cognitive and cultural proficiency of countries and regions where target language is spoken:
 - Increasing knowledge and detail in the areas listed for second year students
 - An awareness of recent cultural and political developments in studied regions
 - Knowledge of some cultural personalities, such as major writers, artists, important historical figures, etc.

Our goals for a minor in language respond to the broader liberal arts curriculum of preparing students to approach information from a field beyond their major field. Therefore, we expect minors to develop a facility with the language to be able to apply their knowledge of language and culture to other content areas. For example, we expect students to know how language functions as a system and to therefore be able to apply the systematic concepts they have acquired (mechanics) to the learning of other languages or to their own use of their native language. In addition, it is our goal that minors know and can comment upon recent political and cultural phenomena surrounding the regions that use the language they have learned. In doing so, we expect that students also acquire an awareness of their own culture as different.

Learning Outcomes for Majors in Modern Languages

- Expected language proficiency according to ACTFL guidelines for a student who does a major:
- 1. Speaking: Intermediate-High (minimum) to Advanced-Plus
- 2. Listening: Advanced to Superior
- 3. Reading: Advanced to Advanced-Plus
- 4. Writing: Advanced to Superior
 - Cognitive and cultural proficiency of countries and regions where target language is spoken:
 - Increasing knowledge and detail in the areas listed for students with a minor
 - An understanding of the broader historical background and perspectives on major events
 - Familiarity with several major cultural, political, and/or literary movements

The Department expects majors to demonstrate these abilities through presenting a comprehensive research project that places cultural phenomena within particular cultural (major periods) and historical contexts. In this project, students demonstrate an ACTFL proficiency level of at minimum Intermediate-High (speaking) and Advanced (writing) levels, but the most successful projects will use skills associated with the Advanced and Superior level of language use, albeit within a very controlled environment.

Arabic

Please see the “Arabic” section of this *Bulletin* for course listings in Arabic. The Learning Outcomes for all modern languages taught in the department are listed above. See also the “Middle East and North African Studies” minor.

Center for Language and Culture (CLC)

The Center for Language and Culture program offers the opportunity for alternative supervised language study. Depending on student enrollment and availability of resources, selected languages may include beginning level American Sign Language or English as a Second Language.

Students contemplating study of ASL or ESL must submit an application to the CLC Director as early as possible during registration. Applications are available in the Department of Modern and Classical Languages, 104 Ruter Hall.

Center for Language and Culture Courses

CLC 100 Sign Language I

Distribution Requirements: ME.

CLC 111 Biblical Hebrew (also listed as RELST 111)

An introduction to Biblical Hebrew. Students learn the Hebrew alphabet, become familiar with the basic paradigms of Hebrew nouns and verbs, and acquire at least 300 common Hebrew words. They apply their learning to prose passages taken from the Book of Judges and Genesis. In addition to learning the structure and grammar of Biblical Hebrew, students focus on key passages of the Biblical text that have been set to music in order to gain a cultural understanding of the passion and religious fervor of the ancient Biblical writers. Parallels to modern Hebrew vocabulary and syntax are noted. Distribution Requirements: HE, IP.

CLC 130 English as a Second Language through Topics in American Culture I

For Allegheny international students who need English language development. The course stresses development in reading comprehension, vocabulary, writing, elements of grammar, and listening and speaking skills. Using topics related to American culture, the course offers individualized instruction based on student competency in English. Distribution Requirements: ME.

CLC 200 Sign Language II

Distribution Requirements: ME.

CLC 230 English as a Second Language through Topics in American Culture II

Continued study of the English language for Allegheny international students with emphasis on reading, writing, grammar and structure, listening, speaking, and presentation skills in English using topics related to the study of American culture. *Prerequisite:* CLC 130 or permission of the instructor.

Chinese

Allegheny College offers a minor in Chinese language and instruction in Chinese (in the original language and in translation); please see the “Chinese” section of this *Bulletin* for details. See also the “Chinese Studies” minor.

French

Allegheny College offers a major and minor in French and instruction in the French language; please see the “French” section of this *Bulletin* for details (see also the minor in “French Studies”). The Learning Outcomes for all modern languages taught in the department are listed above.

German

Allegheny College offers a major and minor in German and instruction in the German language; please see the “German” section of this *Bulletin* for details. The Learning Outcomes for all modern languages taught in the department are listed above.

Latin

Allegheny College offers a minor in Latin and instruction in the Latin language; please see the “Latin” section of this *Bulletin* for details and Learning Outcomes. See also the “Classical Studies” minor.

Literature in Translation Courses

LITRN 270 *Greek Mythology*

An introduction to ancient Greek mythology in its literary, historical, and ritual contexts. The gods, heroes, and monsters of the Greeks are studied through a variety of literary and visual sources, including poetry, myth collections, and the tragedies of classical Athens. Class sessions focus on discussion of primary materials, and topics include the myths of creation, patterns and recurrent motifs in mythological narrative, gender roles and identities, mythological vs. rational thinking, and modern analysis of Greek myth. Distribution Requirements: HE, IP.

Spanish

Allegheny College offers a major and minor in Spanish and instruction in the Spanish language; please see the “Spanish” section of this *Bulletin* for details. The Learning Outcomes for all modern languages taught in the department are listed above. See also the “Latin American and Caribbean Studies” minor.

Sophomore Seminar in Modern Languages

FSMLG 201 *Academic Communication in Languages, Literatures, and Cultures*

An introduction to research and communication in the disciplines of Modern Languages. Through close work with a small number of texts and cultural topics, students engage with the norms and processes of research, including the development of appropriate topics; the location, evaluation, use, and citation of secondary sources; the incorporation of these sources into their own analyses; and the communication of these analyses in writing and speech as part of a scholarly conversation. While given in English, our study prepares language majors for research in the target language, including in the Junior/Senior Seminar and Senior Project. *Prerequisites:* Two language courses at Allegheny College or permission of the instructor.

Music

Professors L. Hepler (Chair), Dearden, J. Hepler, Jurs, Niblock

Music is a creative art form in which sounds are selected and combined to be heard over time. It is also a means of communication and expression. The study of music enables consumers (listeners), re-creators (performers), and creators (composers) to increase their understanding of both the sounded and written aspects of musical language. Departmental courses accommodate a wide variety of musical backgrounds so that students can either begin or continue their musical development in three different areas:

- Courses that concern the sound *materials* that are used to construct musical works, their organization into systems, and their interrelationships, which give rise to musical significance. Students learn to recognize and reproduce the basic elements both in sound and in notation, both in isolation and in complete musical contexts.
- Courses that concern musical *style*; its historic progression through different times, places, and cultures; and specific composers and works which contributed to that progression. Students learn to recognize by sound and sight the ways in which musical elements are combined as compositional conventions: within a particular work, within the output of a composer, and by different composers in a particular time or place.
- Courses that focus on *performance*, the actual production of music in sound. As the physical requirements of playing different instruments are applied to the elements of the score and to interpretative decisions, the potential of notation becomes the reality of sounded music. Repertoire for soloists is studied individually in applied lessons; repertoire for groups of performers is studied in ensembles.

Students wishing to declare a major or minor in Music must first perform an evaluation on their primary instrument or voice for a panel of three music faculty. Students are encouraged to enroll as early as possible in non-juried applied lessons for at least one semester prior to requesting approval for a declaration of major/minor. Interested students should contact the Music Department chair for further information.

Music Learning Outcomes

Successful Music students are expected to:

- Understand tools and methods used in musical research and be able to analyze sources accurately and critically;
- Demonstrate a broad understanding of musical materials and styles both as categories of musical significance and with regard to specific works and composers;
- Demonstrate competence as a performer on the chosen instrument both in solo and ensemble repertoire.

The Music Major

The major program in Music leads to a Bachelor of Arts degree and requires the completion of 48 semester credit hours of coursework. Music majors are required to have a GPA of at least 2.0 in departmental courses required for the Music major at graduation. No courses for the major in Music may be taken Credit/No Credit. Initial course placement is given by diagnostic exam only.

Requirements:

1. **Musical Styles** (10 semester hours):
 - MUSIC 286 *History I, Styles: Greece–1750*
 - MUSIC 287 *History II, Styles: 1750–1900*
 - MUSIC 384 *History III, Music Literature Through Listening*
2. **Music Performance** on the student's principal instrument: 16 semester hours in **one** of the following combinations:
 - 10 semester hours in MUSIC 430–MUSIC 485 and 6 semester hours in MUSIC 110–MUSIC 119; or
 - 11 semester hours in MUSIC 430–MUSIC 485 and 5 semester hours in MUSIC 110–MUSIC 119; or
 - 12 semester hours in MUSIC 430–MUSIC 485 and 4 semester hours in MUSIC 110–MUSIC 119
3. **Musical Materials** (10 semester hours):
 - MUSIC 189 *Music Theory I: Combining Musical Tones*
 - MUSIC 288 *Music Theory II: Harmonic Materials Within One Key*

- **MUSIC 289 *Music Theory III: Harmonic Materials Beyond One Key***

Students who place into MUSIC 288 on the theory diagnostic exam must take an additional 2 semester hours of electives in music, excluding MUSIC 101, MUSIC 188, and MUSIC 189. Students who place into MUSIC 289 on the theory diagnostic exam must take an additional 6 semester hours of electives in music, excluding MUSIC 101, MUSIC 188, MUSIC 189, and MUSIC 288.

4. Advanced Music Courses

- MUSIC 400 *Form and Analysis* (two credits)
- MUSIC 401 *Styles: Post-tonal Music* (four credits)

5. MUSIC 580 *Junior Seminar* (two credits)

6. Senior Project: MUSIC 600 (one credit) and MUSIC 610 (three credits)

Students who intend to pursue graduate studies in music are strongly advised to take applied lessons and ensembles on their principal instrument during all four years at Allegheny; one or two courses in French or German; Independent Studies (MUSIC 590) in special topics in Musical Materials and Musical Styles or conducting; and, for students whose principal instrument is not a keyboard instrument, two semesters of applied piano.

The Music Minor

The completion of 24 semester hours of coursework is required for the Music minor. Three directions are available: minor in Music with music history emphasis; minor in Music with performance emphasis; or minor in Music with music theory emphasis. Music minors are required to have a GPA of at least 2.0 in courses required for a Music minor at graduation. No courses for the minor in Music may be taken Credit/No Credit. Prerequisites are waived only for qualifying scores on diagnostic exams.

The Music Minor with Music History Emphasis

Requirements:

1. Musical Styles (12 semester hours):

- MUSIC 286 *History I, Styles: Greece–1750*
- MUSIC 287 *History II, Styles: 1750–1900*
- MUSIC 384 *History III, Music Literature Through Listening*
- MUSIC 389 *Special Topics in Music History*

2. Music Performance on the student's principal instrument (6 semester hours):

- 4 semester hours in MUSIC 430–MUSIC 485
- 2 semester hours in MUSIC 110–MUSIC 119

3. Musical Materials: 6 semester hours taken from MUSIC 189, MUSIC 288, MUSIC 289, MUSIC 400 and MUSIC 401 as determined by diagnostic exam. Students who place into MUSIC 288 on the theory diagnostic exam must take MUSIC 288 and MUSIC 289. Students who place into MUSIC 289 on the theory diagnostic exam must take MUSIC 289 and MUSIC 400.

The Music Minor with Music Performance Emphasis

Requirements:

1. Musical Styles (6 semester hours)

- MUSIC 286 *History I, Styles: Greece–1750* or MUSIC 287 *History II, Styles: 1750–1900*
- MUSIC 384 *History III, Music Literature Through Listening*

2. Music Performance on the student's principal instrument (12 semester hours):

- 8 semester hours in MUSIC 430–MUSIC 485
- 4 semester hours in MUSIC 110–MUSIC 119

3. Musical Materials: 6 semester hours taken from MUSIC 189, MUSIC 288, MUSIC 289, MUSIC 400, and MUSIC 401 as determined by diagnostic exam. Students who place into MUSIC 288 on the theory diagnostic exam must take MUSIC 288 and MUSIC 289. Students who place into MUSIC 289 on the theory diagnostic exam must take MUSIC 289 and MUSIC 400.

The Music Minor with Music Theory Emphasis

Requirements:

1. Musical Styles (6 semester hours)

- MUSIC 286 *History I, Styles: Greece–1750* or MUSIC 287 *History II, Styles: 1750–1900*
- MUSIC 384 *History III, Music Literature Through Listening*

2. Music Performance on the student's principal instrument (6 semester hours):

- 4 semester hours in MUSIC 430–MUSIC 485
- 2 semester hours in MUSIC 110–MUSIC 119

3. Musical Materials: 12 semester hours taken from MUSIC 189, MUSIC 288, MUSIC 289, and MUSIC 400. Students who place into MUSIC 288 on the theory diagnostic exam must take MUSIC 288, MUSIC 289, MUSIC 400 and MUSIC 401. Students who place into MUSIC 289 on the theory diagnostic exam must take MUSIC 289, MUSIC 400, MUSIC 401 and 2 semester hours of electives, excluding MUSIC 101, MUSIC 188, MUSIC 189, and MUSIC 288.

Music Courses

MUSIC 101 *Music Appreciation*

An introduction to the basic audible elements of music and how they combine to form recognizable characteristics of individual pieces, particular composers, and historic styles. Students become able to identify by ear specific works, composers and styles, including specific themes, textures and tone colors. No musical background required. Three days per week. Distribution Requirements: HE, IP.

MUSIC 102 *Bach to Basics*

An introduction to musical materials, processes, idioms, and forms, as found in the works of J.S. Bach. Solo, chamber and ensemble works for instruments as well as sacred and secular vocal and choral pieces will be studied, primarily by listening and also by reference to musical scores. Recognition of a core list of works will be expected. Distribution Requirements: HE, IP.

MUSIC 103 *Beethoven Symphonies*

A survey of the nine symphonies by Ludwig van Beethoven. This course is designed to involve students in attentive and intentional listening by surveying the composer's effort to resist conformity to the classical style. Students are introduced to these works from the perspective of the performer and from comparative listening to different interpretations. No music background is required. Distribution Requirements: HE, IP.

MUSIC 104 *Music of the Renaissance*

A survey of the history of music from 1430 to 1600. The course will begin with the English and Burgundian schools, and conclude with the establishing of opera in the early 1600s. Music's special relationship with the Reformation and Counter-Reformation will be considered, along with the Italian Madrigal, the Florentine Camerata, and the Venetian polychoral school. No musical background required. Distribution Requirements: HE, IP.

MUSIC 105 *Applied Music: Class Piano*

Class instruction for beginners learning how to read music at the keyboard. Credit: One semester hour. Distribution Requirements: ME.

MUSIC 106 *Applied Music: Class Strings*

Class instruction for beginners learning how to read music on a string instrument. Credit: One semester hour. Distribution Requirements: ME.

MUSIC 108 *Applied Music: Class Voice*

Class instruction for beginners learning how to read and sing music. Credit: One semester hour. Distribution Requirements: ME.

MUSIC 109 Basics of Music Notation

An introduction to the essential skills of reading and writing traditional Western music notation. Topics include durational values, meter signatures, staves, clefs, pitch names, and accidentals. Credit: One semester hour. Distribution Requirements: HE, QR.

MUSIC 110–MUSIC 119 Ensembles

Most ensembles also require an audition. Specific details are on file in the Music Department office. Ensembles have different numbers of weekly rehearsals. Students receive one semester hour of credit per semester of participation, regardless of the weekly rehearsal schedule. *Prerequisite: Permission of instructor.* Credit: One semester hour. Distribution Requirements: HE, ME.

MUSIC 110 Civic Symphony

MUSIC 112 Wind Symphony

MUSIC 113 Wind Ensemble

MUSIC 114 Jazz Band

MUSIC 115 College Choir

MUSIC 116 Women's Ensemble

MUSIC 117 Chamber Choir

MUSIC 118 College Chorus

MUSIC 119 Men's Ensemble

MUSIC 120 Chamber Music

An opportunity for performance in small ensembles such as vocal chamber music, opera scenes, string quartet, piano trio, and brass or woodwind quintets. Students should register as a group or will be placed in a group. Each group receives a weekly faculty coaching. Concurrent registration is required in a "parent" large ensemble within the same instrumental or vocal medium. Pianists and guitarists may alternatively use choral ensembles to satisfy this requirement if placements are not available on their principal instruments. Exceptions are made only by approval of the department chair. Students must be enrolled in Music 120 in order to perform in chamber ensembles. Receiving credit for Music 120 is contingent upon successful concurrent completion of MUSIC 110, MUSIC 112, MUSIC 115, or MUSIC 116. This course may not be taken Credit/No Credit. Credit: one semester hour. Distribution Requirements: HE, ME.

MUSIC 187 History of Jazz

Jazz will be presented from its African origins through the progressive jazz era of the late 1950s and early 1960s. Styles and performance practices of the various periods of jazz will be examined. Three days per week. Distribution Requirements: HE, IP.

MUSIC 188 Fundamentals of Music: Introduction to Major/Minor Keys

An introduction to the basics of sounded and written music. Students learn to recognize, read and reproduce the written symbols of music, such as clefs, rhythms, and major and minor scales and keys. Beginning ear training teaches students to aurally distinguish basic intervals, scale patterns, and rhythms. No musical background is required. Credit: Four semester hours. Distribution Requirements: HE, QR.

MUSIC 189 Music Theory I: Combining Musical Tones

A continuation of the study begun in MUSIC 188. Additional materials include intervals, melodic dictation, triads and their harmonic functions within a key, and four-part vocal texture. Students develop recognition and reproduction of these materials by sight and sound. Two days per week, plus one laboratory. *Prerequisite: MUSIC 188 or placement by diagnostic exam.* Credit: Two semester hours. Distribution Requirements: HE, QR.

MUSIC 230–MUSIC 279 Applied Music Lessons

Individual instruction for students at the beginning through intermediate levels; no minimum level of repertoire required. One semester hour: weekly half-hour lessons; two semester hours: weekly one-hour lessons. Expectations of daily practice and improvement will be established by each applied instructor. Students should expect to spend twice as much time in preparation for one-hour lessons as they would for half-hour lessons. Subsequent registrations on the same instrument may be at any level, subject to the approval of the instructor or the applied coordinator. *An additional fee is required for*

this course; please consult Student Financial Services for the current fee and refund policy. Distribution Requirements: HE, ME.

See Applied Music Course Numbers (below) for course numbers for specific instruments

- **Section 1: one semester hour, weekly half-hour lessons**
- **Section 2: two semester hours, weekly one-hour lessons**

MUSIC 283 Jazz Improvisation

Analysis and performance of basic, familiar jazz forms and devices. Materials are chosen to complement and improve the level of each student. Recordings and solos of master players are analyzed, transcribed and performed. The class becomes a small jazz combo in which the students apply the techniques discussed. Three days per week. *Prerequisite: Permission of instructor.* Distribution Requirements: HE, ME.

MUSIC 286 History I, Styles: Greece–1750

An extensive survey of music from the ancient Greeks through the Baroque era, culminating with J.S. Bach. The course explores the historical sequence and the cultural contexts in which the various styles developed. Students undertake intensive audible and visual score study as well as readings from a variety of sources. Special emphasis is placed on the transitions between eras. *Prerequisite: MUSIC 188 or placement by diagnostic exam.* Distribution Requirements: HE, IP.

MUSIC 287 History II, Styles: 1750–1900

An extensive survey of music from the pre-Classic, Classic, and Romantic eras, beginning with the music of Domenico Scarlatti and concluding with the Impressionism of Claude Debussy. The course explores the historical sequence and the cultural contexts in which the various styles developed. Students undertake intensive audible and visual score study as well as readings from a variety of sources. Special emphasis is placed on the transitions between eras. *Prerequisite: MUSIC 188 or placement by diagnostic exam.* Distribution Requirements: HE, IP.

MUSIC 288 Music Theory II: Harmonic Materials Within One Key

An expansion of material studied in MUSIC 189, using four-part vocal texture. Additional materials include: diatonic harmonic functions in all keys, singing melodies at sight, harmonic dictation, harmonic analysis of musical examples, compositional exercises, non-chord tones, and seventh chords from within one key. This course introduces additional pitches not available in any one key and methods of changing keys. Students develop recognition and reproduction of these materials by sight and sound. *Prerequisite: MUSIC 189 or satisfactory score on diagnostic exam.* Three days per week, plus one laboratory. Distribution Requirements: HE, QR.

MUSIC 289 Music Theory III: Harmonic Materials Beyond One Key

A continuation of material studied in MUSIC 288. Additional materials include using tones from outside a key, mixing materials from major and minor keys, more complex ways of changing keys, methods of obscuring a clear key identity, scales other than major and minor, and more complex chords. The focus is on those deviations for the Major-Minor key system that led to the musical environment at the beginning of the 20th century. The course includes an introduction to 20th-century materials, including exotic scales, complex chord structures, and parallelism. Students develop recognition and reproduction of these materials by sight and sound. *Prerequisite: MUSIC 288 or satisfactory score on diagnostic exam.* Three days per week, plus one laboratory. Distribution Requirements: HE, QR.

MUSIC 330–MUSIC 379 Applied Music Lessons

Individual instruction for students at the advanced level. A minimum level of repertoire difficulty is required as is attendance at weekly performance seminars. Specific details on the repertoire requirements for each instrument are on file in the Music Department office. Expectations of daily practice and improvement will be established by each applied instructor. Two semester hours: weekly half-hour lessons; three semester hours: weekly one-hour lessons. Students should expect to spend twice as much time in preparation for one-hour lessons as they would for half-hour lessons. Normal progress in repertoire and technique is expected in subsequent registration at this level. *An additional fee is required for this course; please consult Student Financial Services for the current fee and refund policy.* Distribution Requirements: HE, ME.

See Applied Music Course Numbers (below) for course numbers for specific instruments

- **Section 1: two semester hours, weekly half-hour lessons**
- **Section 2: three semester hours, weekly one-hour lessons**

MUSIC 384 History III, Music Literature Through Listening

A listening-based survey of the major works of the Western canon. Students experience a large body of major works from the Baroque era to the present. Credit: Two semester hours. *Prerequisite: MUSIC 286 or MUSIC 287 or permission of instructor.* Distribution Requirements: HE, IP.

MUSIC 388 Special Topics in Theory

Not offered during some years. Distribution Requirements: HE, QR.

MUSIC 389 Special Topics in Music History

A special topics course in music history, the focus of which is flexible depending upon the background and interests of students. Required for music history minors, and offered only as needed. Credit: Two semester hours. *Prerequisites: MUSIC 286 and MUSIC 287.* Distribution Requirements: HE, IP.

MUSIC 400 Form and Analysis

An application of functional harmony to the analysis of larger-scale works drawn from piano, symphonic, chamber and choral-orchestral repertoire. Credit: Two semester hours. *Prerequisite: MUSIC 289.* Distribution Requirements: HE, QR.

MUSIC 401 Styles: Post-Tonal Music

An extensive survey of post-tonal music from early Stravinsky to the present time. The course will concern successors to the major-minor key system, including atonality, polytonality, Viennese serialism, midcentury developments such as minimalism, event-based music, chance music, and the belief that all sound, including silence, is music. *Prerequisites: MUSIC 287 and MUSIC 400.* Distribution Requirements: QR, SB.

MUSIC 430–MUSIC 479 Applied Music Lessons

Individual instruction for students at the advanced level. During the initial enrollment at the 400-level, the student must demonstrate skills that will accommodate repertoire at the 200-level. Normal progress in repertoire and technique is expected in subsequent registration at this level. Participation in weekly performance seminars is required. A performance before a jury of at least three full-time music faculty will constitute the final examination. Specific details on the repertoire requirement for each instrument are on file in the Music Department Office. Expectations of daily practice and improvement will be established by each applied instructor. *Prerequisite: Permission of applied area coordinator.* Two semester hours: weekly half-hour lessons; three semester hours: weekly one-hour lessons. *An additional fee is required for this course; please consult Student Financial Services for the current fee and refund policy.* Distribution Requirements: HE, ME.

See Applied Music Course Numbers (below) for course numbers for specific instruments

- **Section 1: two semester hours, weekly half-hour lessons**
- **Section 2: three semester hours, weekly one-hour lessons**

MUSIC 480 Recital I

Individual instruction with weekly lessons. Students must give a public recital of appropriate length and repertoire for this three-credit course. The repertoire and length of the recital are to be determined by the instructor and must be approved by the area coordinator. *Prerequisite: permission of coordinator of applied program.* Credit: Three semester hours. Section 1: weekly half-hour lessons. Section 2: weekly one-hour lessons. This course may not be taken Credit/No Credit. *An additional fee is required for this course; please consult Student Financial Services for the current fee and refund policy.* Distribution Requirements: HE, ME.

MUSIC 485 Recital II

Individual instruction with weekly one-hour lessons. Students must give a public recital of appropriate length and repertoire for this four-credit course. The repertoire and length of the recital are to be determined by the instructor and must be approved by the area coordinator. *Prerequisite: permission of coordinator of applied program.* Credit: Four semester hours, one-hour weekly lessons. This course may not be taken Credit/No Credit. *An additional fee is required for this course; please consult Student Financial Services for the current fee and refund policy.* Distribution Requirements: HE, ME.

Music

MUSIC 529 Internship: Music

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

MUSIC 580 Junior Seminar

The Junior Seminar is a bibliography/research seminar which moves from the study of general bibliographical resources to specific tools for research in music. Students research and deliver papers and class presentations on assigned topics. The evolution of Senior Project topics and early research on these topics are two important goals of this course. However, students are not obligated to continue their seminar topics into their Senior Projects. *Prerequisites: MUSIC 289 and either MUSIC 286 or MUSIC 287.* Credit: Two semester hours.

MUSIC 590 Independent Study

Credit: One to four semester credit hours.

MUSIC 600 Senior Project I

Design and approval of the Senior Project proposal; completion of the bibliography and at least one chapter; a formal meeting with the Senior Project Committee for evaluation of the completed chapter(s) and of the current status of the Project. *Prerequisites: MUSIC 289, MUSIC 580, and either MUSIC 286 or MUSIC 287.* Credit: One semester hour.

MUSIC 610 Senior Project II

Completion of Senior Project. *Prerequisite or corequisite: MUSIC 600.* Credit: Three semester hours.

Applied Music Course Numbers

For content descriptions, see Applied Music Lessons MUSIC 230–279, MUSIC 330–379, and MUSIC 430–479; see also MUSIC 480 *Recital I* and MUSIC 485 *Recital II*.

Brass — see Professor L. Hepler

Trumpet	MUSIC 230	MUSIC 330	MUSIC 430
French Horn	MUSIC 231	MUSIC 331	MUSIC 431
Trombone	MUSIC 232	MUSIC 332	MUSIC 432
Baritone/Euphonium	MUSIC 233	MUSIC 333	MUSIC 433
Tuba	MUSIC 234	MUSIC 334	MUSIC 434
Brass, other	MUSIC 235	MUSIC 335	MUSIC 435

Percussion — see Mr. Corsi

Percussion	MUSIC 240	MUSIC 340	MUSIC 440
Snare Drum	MUSIC 241	MUSIC 341	MUSIC 441
Timpani	MUSIC 242	MUSIC 342	MUSIC 442
Mallets	MUSIC 243	MUSIC 343	MUSIC 443
Drum Set	MUSIC 244	MUSIC 344	MUSIC 444
World Percussion	MUSIC 245		

Keyboard — see Professor Jurs

Piano	MUSIC 250	MUSIC 350	MUSIC 450
Organ	MUSIC 251	MUSIC 351	MUSIC 451
Harpsichord	MUSIC 252	MUSIC 352	MUSIC 452
Jazz & Improvisational Piano	MUSIC 253		

Voice — see Mrs. Niblock

Voice	MUSIC 255	MUSIC 355	MUSIC 455
-------	-----------	-----------	-----------

Strings — see Professor Dearden

Violin	MUSIC 260	MUSIC 360	MUSIC 460
Viola	MUSIC 261	MUSIC 361	MUSIC 461
Violoncello	MUSIC 262	MUSIC 362	MUSIC 462
String Bass	MUSIC 263	MUSIC 363	MUSIC 463
Harp	MUSIC 264	MUSIC 364	MUSIC 464
Guitar	MUSIC 265	MUSIC 365	MUSIC 465
Strings, other	MUSIC 266	MUSIC 366	MUSIC 466

Woodwinds — see Professor J. Hepler

Flute/Piccolo	MUSIC 270	MUSIC 370	MUSIC 470
Oboe	MUSIC 271	MUSIC 371	MUSIC 471
Clarinet	MUSIC 272	MUSIC 372	MUSIC 472
Bassoon	MUSIC 273	MUSIC 373	MUSIC 473
Saxophone	MUSIC 274	MUSIC 374	MUSIC 474
Woodwinds, other	MUSIC 275	MUSIC 375	MUSIC 475

Studio Instruction Fees

Please contact Student Financial Services for information on the current fees and refund policy for Applied Music and Recital classes.

Neuroscience

Professors Conklin (Chair), Clark, Coates, Connell Pensky, Cross, Donmoyer, French, J.R. Hollerman, Kleinschmidt, Knupsky, Mumme, Rankin

An interdisciplinary program, Neuroscience draws primarily upon course offerings of the Biology and Psychology departments. The major is considered a Natural Science major*. To meet the College's curricular requirement for a minor outside the division of the major, students majoring in Neuroscience may minor in any of the social sciences other than Psychology or in any of the humanities. Neuroscience majors are not permitted to minor in Psychology; students wishing to study Psychology in depth may elect to double major in Neuroscience and Psychology. Students exercising this option must meet all the major requirements for both majors and must also take a minimum of 20 semester hours in Psychology that are not counted toward the Neuroscience major. A joint Senior Project for double majors can be arranged.

**For students who matriculated before Fall 2016, Neuroscience courses count as Natural Science for the purpose of satisfying the College distribution requirement then in effect.*

Neuroscience Learning Outcomes

Students completing a major in Neuroscience are expected to be able to:

- Demonstrate a broad understanding of neurophysiology, neuroanatomy, and neurochemistry in relation to sensory processing, behavior, cognition, and health;
- Demonstrate a depth of knowledge in both cell and molecular neurobiology and behavioral and cognitive neuroscience;
- Understand the tools and methods used in neuroscience research and critically analyze the primary literature in specific sub-disciplines within neuroscience;
- Design, conduct, and interpret results of neuroscience experiments and effectively communicate these results in both oral and written form.

The Neuroscience Major

Requirements:

Core Courses/Fundamentals (must take all). *Note:* Students may elect to take one course from the Core Courses/Fundamentals requirements on a Credit/No Credit basis.

- CHEM 110 *Principles of Chemistry 1* or CHEM 120 *Chemical Concepts 1*
CHEM 110 has a corequisite of MATH 158 (prereq: MATH 157) or MATH 160 (prereq: MATH 159 or qualifying placement score). CHEM 120 has a corequisite of MATH 160 (prereq: MATH 159 or qualifying placement score).
- CHEM 112 *Principles of Chemistry 2* or CHEM 122 *Chemical Concepts 2*
- CHEM 231 *Organic Chemistry I: Form and Function*
- BIO 220 *Organismal Physiology and Ecology*
- BIO 221 *Genetics, Development and Evolution*
- NEURO 110 *Foundations of Neuroscience I*
- NEURO 120 *Foundations of Neuroscience II*
- PSYCH 206 *Research Methods in Psychology* and PSYCH 207 *Statistical Methods in Psychology*; OR BIO 385 *Biostatistics*

Junior Seminar/Senior Project

- Junior Seminar. Choose **one** from:
 - BIO 580 *Junior Seminar*. **Permitted topics:** Animal Behavior; Cellular Neurobiology; Physiology of Reproduction/Behavior; Physiology of Vision; Sensory Neurobiology.
 - PSYCH 555 *Junior Seminar: Behavior, Cognition and Health*
 - PSYCH 557 *Junior Seminar: Behavioral Mechanisms of Drug Action*
 - PSYCH 558 *Junior Seminar: Behavioral Neuroscience*
 - PSYCH 559 *Junior Seminar: Clinical Neuropsychology*

Neuroscience

- NEURO 600 *Senior Project I*
- NEURO 610 *Senior Project*

Electives: Take **three** 4-credit courses from the following three areas, including at least one from the Cellular and Molecular list and one from the Behavioral and Cognitive list. At least two of these 4-credit classes must be numbered 300 or above.

1. *Cellular and Molecular Neuroscience*
 - BIO 305 *Molecular Biology*
 - BIO 320 *Cell Biology*
 - BIO 380 *Animal Physiology*
 - NEURO 405 *Neurophysiology*
2. *Behavioral and Cognitive Neuroscience*
 - PSYCH 150 *Sensation and Perception*
 - PSYCH 152 *Behavioral Psychology*
 - PSYCH 154 *Physiological Psychology* and PSYCH 155 *Physiological Psychology Lab* (six credits total)
 - PSYCH 172 *Health Psychology*
 - PSYCH 360 *Health and Psychophysiology* and PSYCH 365 *Health and Psychophysiology Lab* (six credits total)
 - PSYCH 410 *Cognitive Neuropsychology*
 - PSYCH 411 *Systems Neuroscience*
 - PSYCH 415 *Behavioral Pharmacology*
 - PSYCH 441 *Human Memory Processes*
3. *Neuroscience Connections*
 - INTDS 310 *The Neuroscience of Music Comprehension*
 - INTDS 311 *Neuroscience and the Visual Arts*
 - INTDS 312 *Neuroscience of Dance and Movement*
 - INTDS 313 *Neuroscience of Language and Communication*
 - INTDS 315 *History of Neuroscience*

Neuroscience Courses

NEURO 110 *Foundations of Neuroscience I*

An introduction to the fundamental concepts of neuroscience. This course provides a foundation in the anatomy, physiology, and pharmacology of the nervous system from single cells to complex networks responsible for higher brain functions. Specific topics include molecular and cellular principles of neurobiology, electrophysiology, synaptic transmission, pharmacology and drug actions, sensory and motor systems, and disorders of the nervous system. The format of this course includes lectures, discussions, student presentations, and a research paper. We also engage in laboratory demonstrations and experiments. Distribution Requirements: QR, SP.

NEURO 120 *Foundations of Neuroscience II*

An application of fundamental concepts of neuroscience to behavior and mental processes. We examine the role of neuroanatomy, neurophysiology, and neuropharmacology in complex behaviors and cognition. Specific topics include sexual behavior, circadian rhythms, motivation, emotion, visual perception, attention, language, learning, memory, and mental illness. The format of this course includes lectures, discussions, student presentations, and a research paper. We also engage in laboratory demonstrations and experiments. *Prerequisite:* NEURO 110. Distribution Requirements: SB, SP.

NEURO 405 *Neurophysiology*

An exploration of the inner workings of the nervous system. Topics include synaptic transmission (how neurons “talk” to each other), ion channels, receptors, and the neurotransmitter life cycle, and current methods in molecular neuroscience and electrophysiology. Laboratory, one period. *Prerequisite:* BIO 221. Distribution Requirements: QR, SP.

NEURO 529 *Internship: Neuroscience*

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite:* permission of instructor.

NEURO 590 Independent Study

Designed for students who desire to pursue advanced work. Work may consist of experimental laboratory research or of a problem based entirely upon library research. Arranged by consultation. *Prerequisite: Permission of the instructor.* Credit: One to four semester hours.

Senior Project

The Senior Project in Neuroscience Involves completion over two semesters of a research project under the supervision of a Neuroscience Program-affiliated Senior Project advisor and a second reader. Before registering for the Senior Project, students must submit a one-page research proposal approved by the Academic advisor, Senior Project advisor, and second reader. This approval must be secured before students register for courses for their senior year. Neuroscience Program policies regarding the Senior Project are outlined on the Neuroscience Program's website.

NEURO 600 Senior Project I

Individual proposals for senior research projects developed in group and individual meetings with the project advisor and other appropriate faculty members. In order to finalize the research plan, at least one meeting is held with both readers. In addition to oral and written proposals and progress reports, a detailed plan of action for completing the research project is created by the end of the semester. *Prerequisites: A Junior Seminar approved by the Neuroscience program and permission of the instructor.* Credit: Two semester hours.

NEURO 610 Senior Project II

A continuation of Neuroscience 600. Individual and/or group meetings are held to evaluate the progress of individual research projects. Emphasis is placed on data collection, analysis, and interpretation, including modes of presentation of results. A written thesis is submitted prior to an oral defense of the completed project. *Prerequisites: NEURO 600 and permission of the instructor.*

Philosophy

Professors Boynton (Chair), Correm, Farrelly-Jackson, Palmer

Philosophy has traditionally been the very center of the liberal arts. As most of the other disciplines that form the modern liberal arts curriculum have developed from philosophy to establish their own identities, philosophy continues to deal with problems that are fundamental to all disciplines. Philosophers inquire into structures that form the basis of all that exists, the ways we can justify our claims to knowledge, and the values and goals that guide individuals and society.

Allegheny's Philosophy program pays particular attention to the question of the values and goals that ought to guide individuals and society by exploring lived experience and analyzing the social world. More specifically, courses examine the relationship between society and science through a study of the values that have challenged and have fostered scientific activities and technological developments. Courses also examine ethics as a personal ideal as well as democracy and economic development as global and multicultural ideals.

Philosophy Learning Outcomes

Philosophy Major Learning Outcomes

Students who successfully complete a major in Philosophy should be able to:

- Read and comprehend arguments in their primary sources (in translation, as necessary);
- Demonstrate an understanding of the methodologies employed in philosophical inquiry, as well as the cultural and historical origins of those methods;
- Engage in a critical analysis of the legitimacy and limitations of the knowledge these methodologies elicit;
- Appreciate the role of cultural and historical context in the development of philosophy, and appreciate the ethical issues created by the culture and the dominant philosophies of the modern and contemporary West;
- Articulate their own thoughts and ideas relevant to philosophical inquiry orally and write essays that are clear and well structured, exhibiting command of the preceding abilities.

Philosophy Minor Learning Outcomes

Students who successfully complete a minor in Philosophy should be able to:

- Read and comprehend arguments in their primary sources (in translation, as necessary);
- Appreciate the role of cultural and historical context in the development of philosophy, and appreciate the ethical issues created by the culture and the dominant philosophies of the modern and contemporary West;
- Articulate their own thoughts and ideas relevant to philosophical inquiry orally and write essays that are clear and well structured, exhibiting command of the preceding abilities.

The Philosophy Major

The major in Philosophy leads to the Bachelor of Arts degree. Philosophy majors are required to have a GPA of at least 2.0 in the major at graduation. No more than eight credits in Philosophy may be taken Credit/No Credit to count toward the major; two of these credits must be PHIL 600, which is only offered Credit/No Credit.

Requirements.

The major in Philosophy completion of at least 42 semester credit hours as outlined below:

1. **Two** of the following:
 - PHIL 130 *Values and Knowledge*
 - PHIL 140 *Ethics and Community*
 - PHIL 165 *The Examined Life: Philosophy Through the Ages*It is recommended, but not required, that these courses be taken before courses above the 100 level.
2. PHIL 220 *Epistemology: The Theory of Knowledge*
3. **One** of the following:
 - PHIL 230 *Science in Its Cultural Setting*
 - PHIL 240 *Mind and Brain*

4. **One** of the following:
 - PHIL 227/RELST 227 *Religion and the Challenge of Modernity*
 - PHIL 260 *Ancient Greek Philosophy*
 - PHIL 270 *Early Modern Philosophy: Science and Knowledge*
 - PHIL 350 *Ethics and Existence*
5. PHIL 310 *Global Justice*
6. PHIL 580 *Philosophy Seminar*
7. The Senior Project, PHIL 600 PHIL 610
8. Two elective courses in philosophy or approved cognate courses from another discipline. By consulting with faculty, students may use electives to create an emphasis in a specific area of philosophy.

The Philosophy Minor

Philosophy minors are required to have a GPA of at least 2.0 in the minor at graduation. No more than six credits in Philosophy may be taken Credit/No Credit to count toward the minor.

Requirements:

1. **Two** of the following:
 1. PHIL 130 *Values and Knowledge*
 2. PHIL 140 *Ethics and Community*
 3. PHIL 165 *The Examined Life: Philosophy Through the Ages*
 4. PHIL 220 *Epistemology: The Theory of Knowledge*
2. PHIL 310 *Global Justice*
3. PHIL 580 *Philosophy Seminar*
4. Two electives to bring the total to 24 credits.

Philosophy Courses

PHIL 130 *Values and Knowledge*

An introduction to the connections between the values and the ways of knowing that are characteristic of modern western culture. The course focuses upon the pursuit and justification of knowledge and scientific understanding and the ethical and political values that are implicit in those endeavors. *Not open to seniors*. Distribution Requirements: CL, SP.

PHIL 140 *Ethics and Community*

An examination of contemporary challenges facing democracy as an ideal for the moral life and the moral community. *Not open to seniors*. Distribution Requirements: CL, PD.

PHIL 165 *The Examined Life: Philosophy Through the Ages*

A broad introduction to western philosophy through discussion of the perennial questions that have challenged thinkers from ancient Greece to the 21st century: questions about human knowledge, the relation of mind and body, the nature of reality, free will, the existence of God, social justice, ethics, and the meaning of life. Students engage the ideas of philosophers such as Plato, Aristotle, Descartes, Kant, Mill, Wollstonecraft and Sartre, along with those of contemporary thinkers. *Not open to seniors*. Distribution Requirements: CL, HE.

PHIL 205 *Literature, Film and Medicine: Ethical Perspectives*

A philosophical and interdisciplinary study of how narrative forms— literature, cinema, and memoir—may be applied in medical contexts. Through critical discussion of a diversity of works ranging over individual experiences of disease, disability, and end-of-life, students learn how engagement with fictional and autobiographical narratives can enhance the study of healthcare ethics. Topics include dimensions of the healing relationship, questions of meaning in the face of suffering and disease, crossing cultural boundaries, and extending our knowledge of the human experience of mortality. Distribution Requirements: HE.

PHIL 210 Oppression and Liberation

An overview of analyses of oppression and theories of liberation generated by groups traditionally marginalized in the United States. *Prerequisite: Sophomore standing.* Distribution Requirements: CL, PD.

PHIL 212 The Problem of the Self: East and West (also listed as RELST 212)

An examination of the problem of the self in a cross-cultural context. The Eastern traditions are represented by early Buddhism, the Advaita Vedanta philosophy of Sankara, Taoism and Zen Buddhism. The Western tradition is represented by the existential thought of Soren Kierkegaard, the dialogical philosophy of Martin Buber, the deconstructive theology of Mark C. Taylor, and others. *Prerequisite: At least one course in Philosophy or Religious Studies.* Distribution Requirements: HE, IP.

Note: PHIL 212 may be also used to count towards a major or minor in Religious Studies.

PHIL 220 Epistemology: The Theory of Knowledge

What do you really know, and how can you justify your claims to know? This course examines the ways in which philosophers have attempted to answer these questions. It considers skepticism about the possibility of any certain knowledge, presents analysis of reasonable and unreasonable uses and interpretations of the term "truth," and explores recent failed attempts to provide foundations for knowledge in empirical evidence. Distribution Requirements: HE.

PHIL 227 Religion and the Challenge of Modernity (also listed as RELST 227)

An exploration of the philosophical study of religion, particularly in light of the contest between traditional modes of religious expression and the rise of a critical mentality in the modern West. Issues to be addressed may include the ethics of belief, theories of rationality and their relevance to religion, the problem of evil, religious experience, and the epistemic status of belief in God. Distribution Requirements: HE.

PHIL 230 Science in Its Cultural Setting

A study of the structure and justification of scientific theory and of the activities of scientists engaged in theory development. A theoretical component of the course concerns the logical processes of theory acceptance and rejection. That component is fleshed out in historical study of theory development in one or two notable episodes in the history of science, such as the Copernican revolution in astronomy or the development of Darwinian theory in biology. *Prerequisites: One course in Philosophy, or one course in natural science, or permission of instructor.* Distribution Requirements: CL, SP.

PHIL 240 Mind and Brain

A philosophical exploration of historical and 20th-century attempts to understand and to model human thought. A study of episodes in the long tradition of the study of mind and brain in philosophy is connected to current work within the disciplines of neuroscience, cognitive science, and artificial intelligence. Students read the writings of past and contemporary philosophers and practitioners within the other disciplines mentioned. *Prerequisite: One course in Philosophy or permission of the instructor.* Distribution Requirements: HE, SP.

PHIL 250 Philosophy and the Arts

An introduction to a wide range of issues arising in connection with the arts. Students consider the nature of art, aesthetic perception and experience, aesthetic value, expression, representation, interpretation and criticism of the arts, morality and art, and the influence of postmodernism on art and aesthetics. The main ideas of such figures as Plato, Aristotle, Hume, Kant, Nietzsche, Tolstoy, and Freud are discussed alongside those of contemporary philosophers and artists. Distribution Requirements: HE.

PHIL 260 Ancient Greek Philosophy

A comprehensive introduction to ancient Greek philosophy covering the pre-Socratics, Socrates, Plato, and Aristotle. Through close study and discussion of a range of original texts (in translation), students engage the main ideas of these philosophers on such themes as the nature of reality, the soul, knowledge, virtue, and the good life for humans. Distribution Requirements: CL, HE.

PHIL 270 Early Modern Philosophy: Science and Knowledge

A study of translated writings from European thinkers of the 17th and 18th centuries on epistemology, the description of the human mind, and the justification of scientific understanding. Authors may include Galileo, Descartes, Leibniz, Locke, Hume and Kant. The authors present positions relevant to a number of philosophical movements, including the Mechanical Philosophy, Rationalism, Empiricism and Transcendental Philosophy. *Prerequisite: One course in Philosophy.* Distribution Requirements: HE.

PHIL 285 Business and Management Ethics

A consideration of ethical practice within the activities of management professionals. Case studies are considered in the light of philosophical theories of the good, of ethical action, and of individual and social purposes. Examples include the development, sale, and marketing of dangerous or damaging products such as tobacco; the responsibilities borne by management toward various stakeholder groups; and the roles of political influence and bribery at home and in other nations. Discussion is cast in the language of business ethics and is also relevant to management activity in governmental and non-governmental organizations. Distribution Requirements: HE, SB.

PHIL 310 Global Justice

An examination of the difficulties facing the ideals of democracy, international aid and development as global and multicultural movements. We consider the justice of such institutions from the perspectives of international responsibilities and local self-determination. *Prerequisite: PHIL 140 or PHIL 210 or permission of the instructor.* Distribution Requirements: CL, IP.

PHIL 350 Ethics and Existence

A study of some of the major movements in recent continental philosophy with an emphasis on re-imagining ethical responsibility. Among the movements considered are phenomenology, existentialism, philosophical hermeneutics, poststructuralism, deconstruction, and postmodernism. Thinkers to be discussed may include Husserl, Heidegger, Gadamer, Sartre, Foucault, Derrida, Irigaray, Deleuze, Lyotard, and Levinas. *Prerequisite: One course in Philosophy or permission of the instructor.* Distribution Requirements: HE, PD.

PHIL 385 Medical Ethics

A study of the principles of medical ethics as applied to case studies. After studying the nature and foundations of the principles of medical ethics, students present oral and written analyses of medical cases that pose significant ethical issues. *Prerequisite: Not open to first-year students.* Distribution Requirements: CL, SP.

PHIL 529 Internship: Philosophy

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

PHIL 580 Philosophy Seminar

An advanced study of a problem or central figure in philosophy. Course content changes substantially from year to year; consequently, seminars offered under this number may be taken more than once. See department members to discuss, and perhaps to suggest, upcoming offerings. *Prerequisite: At least one course in Philosophy, or permission of the instructor.* This course may not be taken on a credit/no credit basis.

PHIL 590 Independent Study

PHIL 600 Senior Project Tutorial

Preparation for the Senior Project; preliminary research and project proposal including a discussion of how work done outside the department for the major will be integrated into the project. Credit: Two semester hours. To be taken on a Credit/No Credit basis.

PHIL 610 Senior Project

Final research, presentation and defense of the Senior Project.

Sophomore Seminar

FSPHI 201 *Communication in a Discipline*

Philosophy

An introduction to writing and speaking in the discipline of Philosophy. Students engage with a specific philosophical text, author, topic area or problem: details change with each offering of this seminar (please ask instructor concerning details). Research methods, written assignments, and oral arguments and presentations are emphasized. Counts toward the major in Philosophy.

Physics

Professors Lombardi (Chair), Petasis, Poynor, Rahman, Statman, Willey

Physics is crucial for understanding the principles that govern our physical world. It studies everything in nature from the formation of the universe, galaxies, and black holes to the unusual way living systems behave. Technological breakthroughs with lasers, liquid crystal displays, and magnetic resonance imaging have had impact in communications, information technology, and medicine. These have revolutionized our lives in a manner that would not have been possible without physics. From the space shuttle to studies of global warming, physicists work at the forefront of science and technology.

It is the goal of the physics department to help students develop strong backgrounds in experimental, theoretical, and computational physics and to learn the scientific method of investigation. As problems become increasingly complex, it has become clear that successful approaches often combine knowledge from different areas. Because much of 21st century physics is interdisciplinary, we endeavor to teach students how to integrate what they learn in their physics courses with knowledge in other fields. We seek to foster within each student an enthusiasm for learning and critical reasoning which lasts a lifetime. We also help students appreciate physics as a human endeavor that is intellectually satisfying. We strive to make our students aware of the responsibilities facing scientists in our contemporary society and learn how to effectively communicate their ideas in both oral and in written form.

Our graduates pursue a variety of careers or continue graduate studies in various disciplines. Some of our students choose to apply their major in either elementary or secondary public or private school teaching. Students choosing to pursue teacher preparation and certification in physics should contact the physics department and the Coordinator of Teacher Education Programs.

Beginning Courses in Physics: Students planning to to major in Physics or to complete the 3/2 Engineering Program should begin with the PHYS 110 –PHYS 120 sequence.

Physics Learning Outcomes

Physics Major Learning Outcomes

Students who successfully complete a major in Physics are expected to:

- Demonstrate strong analytical and problem-solving skills and some degree of physical intuition;
- Have a broad understanding of the fundamentals of physics, the connections between the different areas of physics and the limitations of each;
- Be able to design and carry-out an independent research project;
- Understand the societal impacts of science and technology;
- Appreciate physics as a valuable human endeavor.

Physics Minor Learning Outcomes

Students who successfully complete a minor in Physics are expected to:

- Demonstrate strong analytical and problem-solving skills,
- Have a broad understanding of the fundamentals of physics, the connections between some of the different areas of physics and the limitations of each,
- Understand the societal impacts of science and technology,
- Appreciate physics as a valuable human endeavor.

Learning Outcomes for Physics Courses

Students who successfully complete courses in Physics are expected to:

- Develop better quantitative skills;
- Appreciate the methods of experimental science if taking a lab course.

The Physics Major

A major in Physics leads to the Bachelor of Science degree and usually requires a minimum of 64 credit hours, including at least 40 credits in Physics as well as additional credits in mathematics and other sciences. Physics majors are required to have a GPA of at least 2.0 in Physics at graduation. All Physics courses taken at Allegheny on a letter-grade basis are included in the calculation, with the following exceptions: 1) courses below the 100-level (e.g. PHYS 020 and PHYS 065); 2) repeated courses for which only the most recent grade counts. Only the first Physics course taken at Allegheny (usually 101 or 110) may be taken on a Credit/No Credit basis. The following courses are required for the major:

Core Courses

1. Mathematics (12 credits)
 - MATH 160 *Calculus I*
 - MATH 170 *Calculus II*
 - PHYS 272 *Mathematics for Physical Science* (or **both** MATH 210 *Calculus III: Multivariate Calculus* and MATH 280 *Ordinary Differential Equations*)
2. Core Physics courses (12 credits)
 - PHYS 110 *Core Concepts in Physics I*
 - PHYS 120 *Core Concepts in Physics II*
 - PHYS 210 *Core Concepts in Physics III*

With departmental approval, students may use PHYS 101 and PHYS 102 in place of PHYS 110 and PHYS 120.
3. PHYS 280 *Programming and Simulation* (4 credits)
4. FSPHY 201 *Investigative Approaches in Physics* (4 credits)

Basic Science Courses

5. CHEM 110 *Principles of Chemistry 1* or CHEM 120 *Chemical Concepts 1* (4 credits)
6. PHYS 260 *Introduction to Thermal Physics*, or CHEM 112 *Principles of Chemistry 2*, or CHEM 122 *Chemical Concepts 2* (4 credits).
7. At least 4 credits from the Natural Science Division that are at the 100-level or above and are **not** in Physics, Mathematics, or physical chemistry (physical chemistry courses include CHEM 242, CHEM 345, and CHEM 442–CHEM 449).

Intermediate courses: a minimum of 12 credits in Physics at the 300-level is required.

Advanced courses

8. At least 2 credits in Physics at the 400-level.
9. 2 credits of Junior Seminar (PHYS 580)
10. At least 4 credits of Senior Project (PHYS 620, or PHYS 600 and PHYS 610).

Physics has become rather broad, ranging from interdisciplinary subdisciplines in astrophysics, biophysics and chemical physics, to traditional subdisciplines in condensed matter physics and optical physics. In order to provide some focus for the student, each student who declares physics as a major must work with an advisor in the physics department to plan a course of study which may be either a standard physics emphasis or a major with an interdisciplinary emphasis. With the aid of his or her advisor, the student must prepare, for departmental approval, a written description and rationale for the course of study. This description must be submitted by the end of the fourth week of the junior year (typically fall semester). It must include a plan of courses to be taken and how those courses satisfy the student's goals.

The **standard physics** emphasis is for those students interested in pursuing a more traditional course of study. These students would consider taking PHYS 310, PHYS 340, PHYS 330 or PHYS 350, and PHYS 370 or PHYS 380. Any Physics course at the 400-level would be useful to this emphasis.

Examples of possible interdisciplinary emphases and possible courses beyond the core courses are described below:

- **Applied Physics:** Students interested in applied physics or who plan to go on into engineering disciplines might construct an emphasis that includes both experimental physics courses, PHYS 330 and PHYS 350 along with PHYS 310, PHYS 340 or PHYS 370. CHEM 112 and an additional chemistry course should also be considered. Most physics courses at the 400-level would be useful for this emphasis.

- **Astrophysics:** Students interested in physics and astronomy might construct an emphasis that includes PHYS 320; PHYS 310, PHYS 340 or PHYS 350; and PHYS 380. Courses at the 400-level most useful for this emphasis would be PHYS 420–PHYS 429.
- **Biophysics:** Students interested in the relationship between physics and biology might construct an emphasis that includes PHYS 330 or PHYS 350, PHYS 360, PHYS 380, CHEM 112 and BIO 220. Courses at the 400-level most useful for this emphasis would be PHYS 430–PHYS 439.
- **Chemical Physics:** Students interested in the relationship between physics and chemistry might construct an emphasis that includes PHYS 330 or 350, PHYS 370, and PHYS 380, along with CHEM 112 and CHEM 231. Courses at the 400-level most useful for this emphasis would be PHYS 440–PHYS 449.

Students are advised that if they are interested in pursuing graduate studies, there may be courses beyond the minimum requirements that they should consider. Such courses might include specific upper level physics courses as well as additional math, computer science, chemistry, or biology depending on the student's particular interest.

Cooperative Engineering Program

Students who participate in a cooperative engineering program (3-2 engineering) with a major in Physics are normally required to take 32 semester hours in Physics including the Junior Seminar. These students should begin their study of Physics with PHYS 110. In some cases students in cooperative engineering programs may take less Physics credit at Allegheny and additional physics courses while at engineering school. They must also complete an introductory chemistry sequence and one semester of computer science.

The Physics Minor

A minor in Physics requires a minimum of 20 credits, at least eight of which must be taken at Allegheny.

Requirements:

- PHYS 110 *Core Concepts in Physics I* (or PHYS 101 *Fundamentals of Physics I*)
- PHYS 120 *Core Concepts in Physics II* (or PHYS 102 *Fundamentals of Physics II*)
- PHYS 210 *Core Concepts in Physics III*
- Electives (eight credits). At least four credits must be at the 300 or 400 level.

The Astronomy Minor

A minor in Astronomy requires a total of at least 22 semester hours.

Requirements:

- MATH 158 *Calculus II for Social/Life Sciences* or MATH 160 *Calculus I*
- PHYS 101 *Fundamentals of Physics I* or PHYS 110 *Core Concepts in Physics I*
- PHYS 129 *Fundamentals of Astronomy*
- PHYS 320 *Astrophysics*
- A course from PHYS 420–PHYS 429 *Current Topics in Astrophysics*
- **One** of the following courses or course sequences:
- CHEM 110 *Principles of Chemistry 1* and CHEM 112 *Principles of Chemistry 2*
- GEO 110 *Physical Geology*
- PHIL 230 *Science in Its Cultural Setting*
- PHYS 102 *Fundamentals of Physics II*
- Any higher-level Physics course

With permission of the department, PHYS 020 *Introductory Astronomy* may substitute for PHYS 129.

Physics Courses

PHYS 020 Introductory Astronomy

A descriptive study of the solar system, the stars, and the universe on its largest scales. Topics covered include the phases of the Moon, the seasons, the tides, the historical roots of astronomy, the constellations, telescopes, the Sun, star formation and evolution, compact objects, and the expansion of the universe. The course is designed to give students an appreciation of the beauty and order of the known universe. Use is made of the Wible Planetarium and the Newton Observatory telescopes. Because observations are weather dependent, students in the course must plan to complete an observation during appropriate evening or other hours. One laboratory per week. Students may not receive credit for both PHYS 020 and PHYS 129. Distribution Requirements: QR, SP.

PHYS 065 Introduction to Physics

For students not intending to major in one of the natural sciences and, as such, it requires no prerequisite course in mathematics. A basic understanding of mechanics, thermodynamics, sound, light, and nuclear physics, as well as some historical perspective, is developed. Emphasis is placed on the application of physics to modern problems and technology. One laboratory per week. May not be taken for credit following successful completion of PHYS 101 or PHYS 111. Distribution Requirements: QR, SP.

PHYS 101 Fundamentals of Physics I

An introductory calculus-based course intended primarily for students majoring in biology, environmental science, and geology with an emphasis on physical concepts and principles from the areas of classical mechanics, thermodynamics and waves. One laboratory/recitation session per week. Students who wish to major in physics after taking this course should consult the physics faculty before deciding which course to take next. Students may not receive credit for both PHYS 101 and PHYS 111. *Corequisite: MATH 158, MATH 160 or permission of instructor.* Offered in sequence with PHYS 102. Distribution Requirements: QR, SP.

PHYS 102 Fundamentals of Physics II

A continuation of PHYS 101 with an emphasis on the concepts of electricity, magnetism, and optics. One laboratory/recitation session per week. Offered in sequence with PHYS 101. Students may not receive credit for both PHYS 102 and PHYS 112. *Prerequisite: PHYS 101 or permission of instructor.* Distribution Requirements: QR, SP.

PHYS 110 Core Concepts in Physics I

An introductory, calculus-based course covering fundamental physical concepts from Newtonian mechanics, such as the conservation of energy and momentum. One laboratory and one recitation session per week. Students cannot receive credit for both PHYS 110 and PHYS 101. Is restricted to first- and second-year students. *Co-requisite: MATH 160 or equivalent.* Distribution Requirements: QR, SP.

PHYS 120 Core Concepts in Physics II

An introductory, calculus-based physics course covering fundamental physical concepts from relativity, electricity and magnetism. One laboratory and one recitation session per week. Students cannot receive credit for both PHYS 120 and PHYS 102. *Prerequisite: PHYS 110 or permission of instructor. Co-requisite: MATH 170 or equivalent.* Distribution Requirements: QR, SP.

PHYS 129 Fundamentals of Astronomy

A study of the Earth and heavenly bodies, their observed characteristics and motions, and the theories that account for them. The course is designed to give the students an understanding of the tools and fundamental physical concepts of astronomy. Topics covered include celestial timekeeping, gravity, orbits, light, the birth and evolution of stars, basic relativity theory, black holes and other compact objects, dark matter, dark energy, and the big bang theory. One laboratory per week. Students may not receive credit for both PHYS 020 and PHYS 129. *Co-requisite: MATH 157, MATH 159, or equivalent (placement into MATH 160 is sufficient).* Distribution Requirements: QR, SP.

PHYS 210 Core Concepts in Physics III

An introductory, calculus-based physics course covering fundamental physical concepts from basic quantum theory and thermodynamics. *Prerequisite: PHYS 120 or permission of instructor. Co-requisite: FSPHY 201.* Distribution Requirements: QR, SP.

PHYS 240 Relativity

An introduction to the experimental findings leading to Einstein's formulation of the special theory of relativity, relativistic kinematics (simultaneity, time dilation, length contraction, etc.), relativistic dynamics (relative mass, momentum, energy, etc.), and the general theory of relativity. Distribution Requirements: QR, SP.

PHYS 260 Introduction to Thermal Physics

An introductory course focusing on the three laws of thermodynamics and the statistical approach to understanding heat and thermal phenomena. *Prerequisite: PHYS 101 or PHYS 110.* Distribution Requirements: QR, SP.

PHYS 272 Mathematics for Physical Science

An introduction to linear algebra, calculus of several variables, and differential equations with special emphasis on applications to linear and non-linear physical systems. Students who have received credit for any two of MATH 210, MATH 280 and MATH 320 will not receive credit for PHYS 272. Does not count toward optional physics course. *Corequisite: MATH 170.* Distribution Requirements: QR, SP.

PHYS 280 Programming and Simulation

A study of numerical simulation that includes learning an operating system (Unix), a programming language (Fortran), and some techniques of numerical analysis to solve problems useful in physics. Part of the course is devoted to learning a general-purpose computational tool (Mathematica). CMPSC 111 or a course in programming is highly recommended prior to taking this course. *Prerequisite: PHYS 120 (or PHYS 102) or permission of the instructor.* Distribution Requirements: QR, SP.

PHYS 310 Mechanics of Particles

A mathematical study of particles and systems of particles using Newton's laws of motion and Lagrangian and Hamiltonian dynamics. Topics include forces, energy, and potential; gravitation and orbits; and momentum and collisions. *Prerequisites: PHYS 120 (or PHYS 102 with permission of the instructor) and PHYS 272 or MATH 280 (or concurrent registration in MATH 280).* Distribution Requirements: QR, SP.

PHYS 320 Astrophysics

A quantitative study of topics including celestial mechanics as described by Kepler's and Newton's laws, radiation in astronomy, telescopes, stellar spectra, star formation, the structure and evolution of stars, relativity, and big bang cosmology. *Prerequisite: PHYS 102 or PHYS 120, or permission of instructor.* Offered alternate years. Distribution Requirements: QR, SP.

PHYS 330 Analog Electric Circuits and Devices

A study emphasizing AC/DC circuits, semiconductor devices, and analog circuits including amplifiers. One laboratory session per week. *Prerequisites: PHYS 102 or PHYS 120 and MATH 170. CMPSC 111 is recommended.* Distribution Requirements: QR, SP.

PHYS 340 Electric and Magnetic Fields

A mathematical investigation of static and time-dependent electric and magnetic fields emphasizing vector differential operators. Laplace's, Poisson's, and Maxwell's equations. *Prerequisite: PHYS 120 (or PHYS 102 with the permission of instructor) and PHYS 272 or MATH 280.* Distribution Requirements: QR, SP.

PHYS 350 Physical Optics

A study of geometrical, physical, and quantum optics. Topics may include the theory and applications of spectroscopy, lasers, fiber optics, and detectors, as well as an analysis of interference, diffraction, and polarization. One laboratory session per week. *Prerequisite: PHYS 102 or PHYS 120.* Distribution Requirements: QR, SP.

PHYS 360 Introduction to Molecular Biophysics

An introduction to the physical foundations of biological molecules and processes. Topics include the fundamentals of molecular dynamics, transport processes in biological molecules, the physics of biological polymers/membranes, biological energy, membrane excitations, nerve impulses, and signal transduction. Physical methods such as resonance techniques and microscopy and their application to the study of biological molecules are also discussed. *Prerequisites: PHYS 210 and CHEM 112, or permission of instructor.* Distribution Requirements: QR, SP.

PHYS 370 Introduction to Solid State Physics

An introductory study of crystalline and amorphous materials including symmetry, crystal-binding, crystal-diffraction, phonons (Einstein- and Debye-models), free electron Fermi gas, Bose-Einstein theory, and superconductivity. Topics of current research interest such as computer simulation of amorphous materials, superlattices, and novel mechanisms of superconductivity are also included. *Prerequisite: PHYS 102 or PHYS 120.* Distribution Requirements: QR, SP.

PHYS 380 Quantum Mechanics

A study of the concepts of quantum mechanics with an emphasis on mathematical analysis. The course begins with an introduction to the Schrödinger equation and the formalism of quantum mechanics. Dirac representation, Hilbert space, and Hermitian operators are introduced. Quantum mechanical systems are compared with classical systems and discussed with respect to quantum mechanical uncertainty, time development, and conservation theorems. Various applications of quantum mechanics are considered. *Prerequisites: PHYS 210 or CHEM 242 and PHYS 272 or equivalent.* Distribution Requirements: QR, SP.

PHYS 420–PHYS 429 Current Topics in Astrophysics

An examination of selected current topics of interest in astrophysics, such as dark matter, dark energy, black hole formation, star cluster dynamics, stellar collisions, the mass of neutrinos, planetary formation, and gravity wave sources. Students contribute to the class through discussion and brief presentations. Group discussion is based on readings from journal articles and monographs. *Prerequisites: PHYS 102 or PHYS 120; and PHYS 020, PHYS 129, or PHYS 320; or permission of instructor.* Credit: Two semester hours. Offered alternate years. Distribution Requirements: QR, SP.

PHYS 430–PHYS 439 Current Topics in Biophysics

An examination of a current topic of interest in biophysics. The course focuses on the molecular structure, energetics and dynamics of biological systems with an emphasis on physical spectroscopic techniques. Students contribute to the class through discussion and brief presentations. Group discussion is based on readings from journal articles and monographs. *Prerequisite: PHYS 210 or permission of instructor.* Credit: Two semester hours. Distribution Requirements: QR, SP.

PHYS 440–PHYS 449 Current Topics in Chemical Physics

An examination of a current topic of interest in chemical physics. Students contribute to the class through discussion and brief presentations. Group discussion is based on readings from journal articles and monographs. Some laboratory work may be included. *Prerequisite: PHYS 210 or permission of instructor.* Credit: Two semester hours. Distribution Requirements: QR, SP.

PHYS 450–PHYS 459 Current Topics in Optical Physics

An examination of a current topic of interest in optical science. Students contribute to the class through discussion and brief presentations. Group discussion is based on readings from journal articles and monographs. Some laboratory work may be included. *Prerequisite: PHYS 210 or permission of instructor.* Credit: Two semester hours. Distribution Requirements: QR, SP.

PHYS 460–PHYS 469 Current Topics in Theoretical Physics

An examination of some theories that have revolutionized our understanding of nature and the universe. Students contribute to the class through discussion and brief presentations. Group discussion is based on readings from journal articles and monographs. *Prerequisite: PHYS 210 or permission of instructor.* Credit: Two semester hours. Distribution Requirements: QR, SP.

PHYS 470–PHYS 479 Current Topics in Computational Physics

An examination of theories and computational algorithms that have revolutionized our understanding of nature and the universe. Students contribute to the class through discussion and brief presentations. Group discussion is based on readings from journal articles and monographs. *Prerequisite: PHYS 210 or permission of instructor.* Credit: Two semester hours. Distribution Requirements: QR, SP.

PHYS 480–PHYS 489 Current Topics in Materials Physics

An examination of current topics of interest in materials physics, such as surface effects, fluid flow, tribology, and polymers. Students contribute to the class through discussion and brief presentations. Group discussion is based on reading from journal articles and monographs. *Prerequisites: PHYS 210 or permission of the instructor.* Distribution Requirements: QR, SP.

PHYS 529 Internship: Physics

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

PHYS 580 Junior Seminar

A seminar in which students, faculty, and guest lecturers make presentations on current topics in physics. The Junior Seminar has three goals: (1) to begin student preparation for the Senior Project, (2) to facilitate student awareness of the impact of physics on society, and (3) to inform the student of other areas of physics research. This is accomplished by becoming familiar with research in the department, giving an oral presentation on some aspect of physics and society, and preparing a written and oral review of research relevant to a prospective senior project. Students are also expected to attend department seminars. Credit: Two semester hours.

PHYS 590 Independent Study

To be arranged. Credit: variable.

PHYS 600 Senior Project I

The first in a sequence of two courses involving experimental and/or theoretical research under the direction of a faculty member. Background information is collected and preliminary work is carried out. Attendance at departmental lectures is required. Credit: Three semester hours.

PHYS 610 Senior Project II

Completion of the senior research project. Students write reports and discuss their results at an oral presentation given for faculty members. In most cases they also present their findings at regional or national physics meetings and lectures. Taken after successful completion of PHYS 600. Credit: Three semester hours.

PHYS 620 Senior Project

Equivalent to the PHYS 600–PHYS 610 sequence and under special circumstances may be taken as an alternate to PHYS 600 and 610. *Permission of instructor required.*

Sophomore Seminar

FSPHY 201 Investigative Approaches in Physics

An investigative laboratory course that emphasizes experimental design and analysis, interpretation of data, and written and oral presentation. This course stresses independent and cooperative laboratory work. Writing and speaking in the physical sciences is emphasized through written, oral and poster presentations. *Prerequisite: PHYS 120 or PHYS 102.*

Political Science

Professors Mattiace (Chair), Bloeser, Callen, Christie-Searles, Gehring, Harward, Kirschner, Smith, Tamashiro, Wesoky

The Department of Political Science offers courses in: Culture and Politics; Globalization and Transnational Politics; Institutions and Processes; Policy Studies; and Problems in Democracy. These courses are designed to help students understand politics, political behavior, and political life and discourse, as well as the institutions and processes through which public policy is formed, in different political systems by: a) examining enduring value issues such as freedom, justice, equality, order, and power; b) exploring the practical and ethical implications of contemporary issues in public policy; c) providing alternative methodological approaches (quantitative, interpretative, dialectical, literary, cultural) to the analysis of politics; d) studying the great texts of political thought; and e) leading students to examine critically their own political beliefs and values and those of others.

Political Science Learning Outcomes

Students in the Political Science department are expected to achieve the Learning Outcomes listed below in three areas: Values, Knowledge, and Skills.

Values. Students will:

- Value the rights and responsibilities that spring from membership in a democratic political community.
- Appreciate the diversity of values and beliefs that constitute different political traditions.

Knowledge. Students will:

- Demonstrate an understanding of basic political institutions and processes that shape both domestic and global politics.
- Be able to apply disciplinary knowledge to critically assess important public issues.
- Understand theoretical approaches to the study of power, authority, and justice.

Skills. Students will:

- Be able to critically examine political phenomena, evaluate conflicting arguments, assemble and present empirical evidence, make reasoned conclusions from that evidence, and connect these conclusions to theoretical paradigms and/or practical experiences and considerations.
- Be prepared to engage in informed, literate conversations, both written and oral, regarding important political issues.

The Political Science Major

At graduation Political Science majors must present a GPA of at least 2.0 in the 46 (or, in some cases, 45) semester hours of required Political Science coursework. All courses toward the major taken at Allegheny College are included in the GPA calculation, with the exception of repeated courses for which only the most recent grade counts. Students other than transfer students may present a total of 16 semester hours toward the major on a Credit/No Credit basis from a) courses taken at other approved institutions or b) specially arranged internships. Any additional credits beyond the 16-credit limit must be approved by the department chair. All other courses must be taken on a letter-grade basis. One AP course (U.S. Politics or Comparative Politics) will be accepted on a Credit/No Credit basis as a substitute for the department's introductory course, but cannot be used to satisfy the department's subfield distribution requirement described below.

A major in Political Science leads to the Bachelor of Arts degree and requires the successful completion of 46 semester hours (45 for some double majors) of coursework in Political Science. All majors must present two introductory courses from POLSC 110, POLSC 120, POLSC 130, and POLSC 140; students are strongly encouraged to complete these by the end of the sophomore year. Three introductory courses may count toward the major. Majors must also present at least three Political Science courses at the 300 level or above. Students must complete one junior seminar from POLSC 580–POLSC 586; generally five junior seminars of varying topics are offered each year. Students must complete the segmented senior project (POLSC 600, POLSC 610; six credits total). Both POLSC 600 and POLSC 610 must be taken on the letter-grade basis.

From the following, all majors must complete **three courses** each in **two categories**. Double counting of courses (some courses fall into more than one category) is permitted.

CULTURE AND POLITICS: Culture is said to be a key factor in shaping our political lives. The courses below explore political culture in different ways and in different domains, but all share one or more of the following themes:

1. Culture as norms informing policies, institutions, and behaviors;
2. Culture as influencing inequalities, movements, and change;
3. Culture as a politically created and contested terrain.
 - POLSC 215 *Politics in Popular Culture*
 - POLSC 221 *Law, Courts, and Judicial Processes*
 - POLSC 228 *Government and Politics of China*
 - POLSC 232 *Government and Politics of the Middle East*
 - POLSC 235 *Government and Politics of Latin America*
 - POLSC 261 *United States–Latin American Relations*
 - POLSC 285 *American Political Thought*
 - POLSC 326 *Sports and the Politics of Race and Nation*
 - POLSC 329 *Islam, Migration & Race in Western Europe*
 - POLSC 334 *Government and Politics in South Asia*
 - POLSC 336 *Politics and Culture in the Asia-Pacific*
 - POLSC 355 *The Arab-Israeli Conflict*
 - POLSC 386 *Chinese Political Thought: From Confucius to the New Left*
 - ENGL 371/POLSC 371 *Politics and Literature*
 - POLSC 450 *The Politics and Psychology of Persuasion and Prejudice*
 - POLSC 457 *National Security Controversies*
 - POLSC 482 *Race and the American Political Mind*
 - POLSC 484 *American Conservatism*
 - POLSC 486 *The Death and Life of American Liberalism*

GLOBALIZATION AND TRANSNATIONAL POLITICS: Studies of transnationalism focus on the effects of norms, ideas, people, policies, movements, networks, and institutions that cross national boundaries. Transnational phenomena increasingly challenge how political scientists think about economies, national boundaries, and sovereignty. Studies of globalization examine the intensification of transnationalism. In our classes on globalization and transnationalism, students will learn to:

1. Investigate the ways that global or transnational forces shape the regional, national, and local arenas and vice versa;
2. Analyze transnational and global phenomena as contested, uneven, and value-laden;
3. Evaluate the costs and benefits of globalization for individuals and collectivities.
 - POLSC 226 *Government and Politics of Western Europe*
 - POLSC 242 *Immigration and Citizenship*
 - POLSC 245 *The Politics of Third World Development*
 - POLSC 251 *U.S. Foreign Policy*
 - POLSC 261 *United States–Latin American Relations*
 - POLSC 325 *Rights in Comparative Perspective*
 - POLSC 326 *Sports and the Politics of Race and Nation*
 - POLSC 329 *Islam, Migration & Race in Western Europe*
 - POLSC 354 *War and Peace in the Middle East*
 - POLSC 355 *The Arab-Israeli Conflict*
 - POLSC 427 *The European Union*
 - POLSC 459 *Civil Wars*

INSTITUTIONS AND PROCESSES: Struggles over the rules of the game--institutions and processes--reside at the center of political debates. Institutions structure and constrain the context of political action and policymaking. They are persistent, structured, and comparable across time and political communities and are not politically neutral. Indeed, policy biases can be directly linked to institutional biases that structure the decision-making environment of political actors. As a consequence, policy debates are actually conflicts about which rules and structures are proper *and* which outcomes are preferred. In courses in "Institutions and Processes" students will:

1. Explore how institutions emerge, persist, change, and decay;
2. Examine and explain political behavior that occurs within the context of non-neutral rules and procedures;

3. Reflect on ways that the preferences of political actors interact with institutions to generate specific policy outcomes.
 - POLSC 221 *Law, Courts, and Judicial Processes*
 - POLSC 226 *Government and Politics of Western Europe*
 - POLSC 228 *Government and Politics of China*
 - POLSC 232 *Government and Politics of the Middle East*
 - POLSC 235 *Government and Politics of Latin America*
 - POLSC 301 *Constitutional Law: Powers of Government*
 - POLSC 318 *Politics and the Media*
 - POLSC 320 *State and Local Politics*
 - POLSC 321 *Urban Government and Politics*
 - POLSC 327 *The Political System of Germany*
 - POLSC 334 *Government and Politics in South Asia*
 - POLSC 354 *War and Peace in the Middle East*
 - POLSC 412 *U.S. Congress*
 - POLSC 413 *U.S. Presidency*
 - POLSC 427 *The European Union*
 - POLSC 457 *National Security Controversies*
 - POLSC 459 *Civil Wars*

POLICY STUDIES: Public policy is the formal realization of ideas, norms, and political objectives through governmental and international actions, rules, and the creation of new organizational forms. Public policy analysis uses methodologies such as case studies, game theory, and statistics to better understand the origin and delivery of public policy. In our classes on public policy, student will learn to:

1. Evaluate the effectiveness of a policy and to compare systematically across policy options;
2. Trace the origin of and debate over public policies, looking at how legislative demands, interest groups, constituent interests, and political entrepreneurs all shape the eventual form that policy takes;
3. Assess the impact of policy on individuals, vulnerable groups, movements, and institutions, as well as on norms and political culture.
 - POLSC 213 *Health Policy in the U.S.*
 - POLSC 242 *Immigration and Citizenship*
 - POLSC 251 *U.S. Foreign Policy*
 - POLSC 261 *United States–Latin American Relations*
 - POLSC 303 *Constitutional Law: Civil Rights and Civil Liberties*
 - POLSC 325 *Rights in Comparative Perspective*
 - POLSC 450 *The Politics and Psychology of Persuasion and Prejudice*
 - POLSC 453 *Deterrence Theory and Nuclear Defense*
 - POLSC 457 *National Security Controversies*
 - POLSC 489 *Statistics and Data Analysis*

PROBLEMS IN DEMOCRACY: Democracy and the corollary “self-evident truth” that all human beings are created equal has become a widely accepted basis for legitimate government in the modern era. However, the meaning of democracy remains contested. Is democracy simply a form of government, or does it also include social, economic, and cultural practices and institutions? To what extent, and in what ways, does the health and survival of democracy depend upon the character and behavior of citizens? The establishment and preservation of democracy depends upon how we answer such questions, and for that reason, such questions continue to confront democratic theory and practice. In courses on the “problems of democracy,” students will learn to:

1. Recognize and evaluate competing conceptions of democracy by developing arguments and using evidence;
2. Identify and confront the challenges of establishing and preserving freedom, equality, and order through democratic practices;
3. Recognize, confront, and where necessary rework the assumptions, values, and habits/behavior that shape our thinking about democracy and the responsibilities of democratic citizenship.
 - POLSC 235 *Government and Politics of Latin America*
 - POLSC 242 *Immigration and Citizenship*
 - POLSC 285 *American Political Thought*

- POLSC 303 *Constitutional Law: Civil Rights and Liberties*
- POLSC 318 *Politics and the Media*
- POLSC 325 *Rights in Comparative Perspective*
- POLSC 329 *Islam, Migration & Race in Western Europe*
- POLSC 334 *Government and Politics in South Asia*
- POLSC 336 *Politics and Culture in the Asia-Pacific*
- POLSC 380 *Classical Political Thought*
- POLSC 382 *Modern Political Thought*
- POLSC 386 *Chinese Political Thought: From Confucius to the New Left*
- POLSC 459 *Civil Wars*
- POLSC 484 *American Conservatism*
- POLSC 486 *The Death and Life of American Liberalism*

Major programs may be arranged in combination with other departments. Students who are interested in double majors, or in creating a student designed major, should see Professor Mattiace. Students who wish to declare either a major in Political Science or a combined major involving Political Science should obtain a copy of the junior-senior program from the department. All majors must follow this program. Students are encouraged to discuss with their academic advisors those cognate courses that should be scheduled to enhance the particular focus of the Political Science or combined major they select.

Political Science majors who anticipate applying to the Washington Semester, Washington Center, or similar programs should discuss these plans with their advisor as soon as possible. Those wishing to study abroad or to declare an International Studies major should contact the International Studies program chair, Professor Reeck. All students who wish to take part in an internship should speak with their advisors and the department liaison referred to in the internship descriptions below. Students may offer a maximum of eight semester hours of coursework from internships.

The Political Science Minor

The minor field program in Political Science requires a minimum of 20 semester hours of coursework, including one of POLSC 110, POLSC 120, POLSC 130, POLSC 140 and four elective courses from POLSC 190 through POLSC 586. Two of the four elective courses must be at the 300 level or above. All courses for the minor taken at Allegheny must be taken on a letter-grade basis. Students who wish to declare a minor should see the chair of the Political Science department, Professor Mattiace.

Political Science Courses

POLSC 110 *U.S. National Government and Politics*

An introduction to national political institutions in the United States: The Presidency, Congress, Supreme Court, and administrative agencies. Attention is given to citizen participation, elections, political parties, interest groups and public policy making. Distribution Requirements: CL, SB.

POLSC 120 *Comparative Government and Politics*

An introduction to the development of political institutions and the distribution and exercise of political power in selected western, communist and "Third World" countries. Special attention is devoted to the impact of institutional and cultural patterns upon the quality of life in those countries. Distribution Requirements: CL, IP.

POLSC 130 *World Politics*

An introduction to politics among nation-states and the conduct of international relations. Topics addressed include the dynamics of war and peace, international law and diplomacy, state and non-state actors in international relations, and transnational economic and environmental issues. Distribution Requirements: PD, SB.

POLSC 140 *Political Philosophy*

An introduction to political theory with special emphasis on the problem of justice. Topics include human nature and politics, justice and the best way of life, and the possibility of a just society. Readings are drawn from the work of political

philosophers, social theorists, and literary figures such as Plato, Aristotle, Hobbes, Locke, Marx, Freud and Dostoyevsky. Distribution Requirements: CL, SB.

POLSC 213 *Health Policy in the U.S.*

An examination of the origins, status, and future of health care policies, with a focus on the history of the U.S. health care system and attempts at reform. Special topics to be explored include outbreaks of infectious diseases, the euthanasia movement, funding of medical research, the economic behavior of pharmaceutical companies, and food and nutrition policy. POLSC 110 is recommended. Distribution Requirements: PD, SB.

POLSC 214 *Rural Politics*

A study of the unique political context and problems faced by small towns and rural communities in the United States. Small towns and rural counties face unique problems in terms of education, crime, economic development, social service provision, and infrastructure. To gain a better understanding of the types of political issues and concerns faced by rural towns, as well as specifically how political conflicts unfold in rural settings, students engage in research and service in Meadville and nearby communities. Distribution Requirements: CL, PD.

POLSC 215 *Politics in Popular Culture*

An examination of how American popular culture intersects with American politics. We focus on the processes through which common forms of entertainment, advertising, and material consumption influence our political perceptions, values, and actions. Special emphasis is placed on how experiences with products of popular culture influence our understandings of and (in)actions toward others. Through class discussion and analytical papers, students identify, explain, and evaluate how the content of popular culture influences their political conduct and the political conduct of others. Distribution Requirements: CL, SB.

POLSC 219 *American Political Development*

An examination of American political history, with a particular focus on institutions. Readings, which examine critical events from the 19th and 20th centuries, discuss how crisis, conflict, and parties have produced a stronger national government in the United States. We also consider how American political institutions shape individual identity, and we explore the link between institutional change and policy content. Discussions revolve around the costs and benefits of building a stronger federal state and how changes in the federal state complement or contradict constitutional principles. Distribution Requirements: CL, SB.

POLSC 220 *Democracy for the Few? Political Parties, Interest Groups, and Social Movements*

The study of political participation and political influence in the United States. The great promise of democracy is that all citizens will have meaningful opportunities to defend their interests and advance their notions of the common good. Yet citizens have grown increasingly concerned about whether such opportunities truly exist in their democracy. We focus on how parties, interest groups, and social movements structure political participation. By integrating theory with both historical and current examples, students assess whether citizens can still find, or perhaps even create, opportunities to exert meaningful influence on political decisions. Distribution Requirements: CL, SB.

POLSC 221 *Law, Courts, and Judicial Processes*

A study of the development, organization, and operation of federal and state court systems, with consideration given to the political contexts in which courts operate. Particular attention is given to normative and positive accounts of judicial decision-making, including the role and limits of judicial discretion and the importance of institutions in shaping judicial outcomes. Distribution Requirements: CL, SB.

POLSC 226 *Government and Politics of Western Europe*

An introduction to Western Europe comparing societies, cultures and political institutions. Diverse historical experiences are the background to an analysis of post-war and contemporary issues such as European integration; the welfare state; the evolution of party politics; NATO and changing security issues; and immigration and nationalism. Distribution Requirements: IP, SB.

POLSC 228 Government and Politics of China

An overview of government and politics in 20th-century China, with a stress on state-society relations. A major focus of the course rests on the post-Mao period and questions such as economic reform and the Tiananmen Square student movement and prospects for democracy. Other topics will include women's issues, population and environmental issues, and China's foreign relations. The course draws on autobiographical, journalistic, and cinematic sources as well as text-based readings to chart Chinese politics in this century. Distribution Requirements: IP, SB.

POLSC 232 Government and Politics of the Middle East

An examination of political trends in the Middle East and North Africa, focusing on issues such as state-society relations, secular-religious tensions, the role of oil wealth, and the status of women. Case studies of several representative states are included. Distribution Requirements: IP, SB.

POLSC 235 Government and Politics of Latin America

An examination of political trends in Latin America, focusing on issues such as the relationship between states and markets, the politics of memory in post-authoritarian regimes, and the challenges of democratization. Case studies of several representative states are included. Distribution Requirements: IP, SB.

POLSC 242 Immigration and Citizenship

An exploration of recent immigration to the United States focused on Latin America and Latin American migrants in the United States. We examine the historical foundations of current immigration policy as well as relevant themes in immigration studies, including political participation, religion and migration, the economics of immigration, and social incorporation. We also examine the extent to which contemporary immigration patterns compare to previous immigration waves. Distribution Requirements: PD, SB.

POLSC 245 The Politics of Third World Development

An introduction to the ongoing struggle over the economic and political "development" of Third World nations. Since the end of World War II, the poorer or so-called "Third World" or "developing" countries of the world have sought to develop their economies and political systems. Despite formidable application of resources and expertise, however, so much has seemingly gone wrong: international debt mounts, poverty deepens, environmental systems deteriorate, population grows, famine continues, and the pernicious gap between rich and poor widens. Why is this so and, given the prevailing distribution of power and influence, what can be done? These questions are explored with particular reference to the domestic and international politics of Asia and Africa and special attention to emerging policy alternatives. This course is particularly well-suited to first- and second-year students with little or no training in political science. Distribution Requirements: IP, PD.

POLSC 248 Human Rights

An introduction to international human rights. We explore norms and practices regarding personal integrity rights, including mass killing, torture, and disappearances, and civil rights, such as restrictions on speech or religion. Students are introduced to literature on why governments repress, patterns of treaty ratification and compliance, and variation in the success of strategies to improve human rights. Students also evaluate the cases for and against the international protection of human rights and derive hypotheses about international human rights behavior. A field trip may be required. Distribution Requirements: PD, SB.

POLSC 251 U.S. Foreign Policy

An examination of the factors that condition the formulation and conduct of U.S. Foreign Policy. These factors include: the general political, cultural, and economic conditions within the U.S.; various governmental agencies with responsibility for foreign affairs; nongovernmental groupings that affect the scope, direction, and efficacy of U.S. Foreign Policy; international organizations; and the policy-making process itself. Distribution Requirements: CL, HE.

POLSC 261 U.S.–Latin American Relations

An analysis of United States–Latin American relations over time, with a special emphasis on the post-Cold War period. The central question to be addressed is whether there will be greater harmony between the two regions now that the threat of communism has disappeared or if there will be increased conflict because of the exponential rise of drug trafficking,

migratory pressures, growing economic disparity and increasing environmental pressures. An examination of historical case studies will provide students with the requisite background for assessing current issues. Distribution Requirements: IP, PD.

POLSC 280 *The Tragedy of Citizenship*

A study of political psychology focused on the abilities and limitations of citizens. As citizens, we often face complex circumstances and difficult political choices. As human beings, we have limited psychological abilities. We have limited powers of perception and comprehension, and thus are always at risk of error. Yet our need to make choices about what is best for ourselves and our political communities remains. As students of political psychology, we explore how we can attempt to compensate for those limitations. Distribution Requirements: CL, SB.

POLSC 285 *American Political Thought*

An analysis of selected classics of American political theory from the first settlement throughout the founding of the Republic up to the present. Texts are drawn from the works of theorists and commentators such as Winthrop, Paine, Hamilton, Madison, Jefferson, Lincoln, Tocqueville, Henry Adams, Chesterton and Lippmann, as well as from the work of literary figures such as Hawthorne, Melville, Twain and Faulkner. Distribution Requirements: CL, HE.

POLSC 289 *Introduction to Research Design* (short title: Intro Research Design)

An introduction to the research process in political science. Students acquire tools useful in identifying, planning, and developing research projects such as seminar papers and the senior project. Students learn how to craft a research question; recognize, survey, and discuss the relevant literature; select and justify an appropriate method; and identify pertinent information to answer the question. Credit: Two semester hours. Distribution Requirements: SB.

POLSC 301 *Constitutional Law: Powers of Government*

An exploration of U.S. Supreme Court decisions regarding judicial, legislative, and executive power as well as the relationship between states and the national government in a range of policy areas. Distribution Requirements: CL, SB.

POLSC 303 *Constitutional Law: Civil Rights and Civil Liberties*

A study of landmark U.S. Supreme Court civil rights and liberties cases. Topics include: speech, obscenity, libel, press, religion, privacy, due process, and the equal protection of the laws. Distribution Requirements: CL, PD.

POLSC 318 *Politics and the Media*

An examination and evaluation of the role of mass media in American politics. Topics include: the legal framework that enshrouds freedom of the press, the newsmaking process, sources of potential bias, the development of investigative journalism, corporate ownership of the media, the role of the press in elections, the impact of mass media on individual behavior and opinion formation, and the politics of entertainment, concluding with an exploration of the process by which the media have become a tool, indeed a weapon, in the contemporary U.S. political process. Recommended: POLSC 110. Distribution Requirements: CL, SB.

POLSC 320 *State and Local Politics*

An examination of the interaction among state and local governments, representatives, institutions and policies. Topics include gubernatorial policy roles and arenas, the state legislative process, the challenge devolution plays for state and local governments, the role of parties in candidate-focused elections, and interest group organization. Distribution Requirements: CL, SB.

POLSC 321 *Urban Government and Politics*

An examination of the political institutions and the policy-making processes in American cities. Emphasis is on the impact of historical and social conditions, institutional arrangements, and power relationships on significant problems facing urban areas, including metropolitan organization, taxing and spending, law enforcement, education, social welfare and housing. Distribution Requirements: CL, SB.

POLSC 325 *Rights in Comparative Perspective*

A comparison of legal and political rights throughout the world. We focus on the differences between negative and positive rights, the role of the state in defining and guaranteeing rights, and the spread of "American-style" rights (e.g., rights demanded of the government via the courts that influence social policy) and law-focused social movements throughout the

rest of the world. States to be considered include China, the European Union, Germany, India, Japan, Canada, and the United States. Distribution Requirements: CL, IP.

POLSC 326 *Sports and the Politics of Race and Memory*

A comparative study of the intersection of politics and sports focusing on how sports programs, teams, and fans influence, reinforce, and/or challenge political power. Themes include the relationship between racism and sports; the role of sports in nationalism; how sports are used to resist, or promote, colonialism; how the relaxation of naturalization requirements for athletes can influence immigration policies for non-athletes; how sporting events help forge a national community among diverse peoples; and the impact of globalization on sports. Countries that might be studied include the United States, India, Argentina, Germany, New Zealand, and Japan. Distribution Requirements: IP, PD.

POLSC 327 *The Political System of Germany*

An introduction to the political system of Germany, with emphasis on actual, daily political events and the current political climate in Germany. Both foreign and domestic issues are discussed, including topics such as East/West relations, disarmament, unification, the environment and Neo-Nazism. Class time is divided between lecture and discussion of outside readings. (*Taught in Cologne, Germany.*)

POLSC 329 *Islam, Migration & Race in Western Europe*

An interdisciplinary immersion into debates over identity, nationalism, citizenship, religious freedom, immigration, freedom of expression, racism, and secularism in Europe. Students explore how different cultures construct racial hierarchies, how religious identification and racialized categories bleed into one another, and how individuals and groups respond to discrimination and subvert and redefine religious and racial identities in Europe. Distribution Requirements: IP, PD.

POLSC 330 *Megacities*

A study of urban conglomerates whose population is eight to ten million. We examine the urban form and citizenship in geographically and culturally diverse megacities, including Mexico City, New York, Sao Paulo, and Cairo. Drawing on case studies, we ask what we can learn about the global processes that characterize contemporary politics by studying so-called "global cities." We pay particular attention to the relationship between globalization and the spatial organization of cities, exploring, for example, how social actors and states in specific places claim, reclaim, purpose, repurpose, surveil, contest, and govern public space as part of broader neoliberal social transformation. *Prerequisite: POLSC 120 or POLSC 130 or POLSC 245.* Distribution Requirements: IP, SB.

POLSC 334 *Government and Politics in South Asia*

An introduction to the politics of India, Pakistan, and Bangladesh, three South Asian countries that collectively account for roughly 22 percent of the world's population. The first part of our study constitutes a brief survey of the political history of each country. The second part explores the following topics and invites comparison among different countries: Caste, Class, Language and Ethnicity; Democratization, Parties, and Elections; Civil-Military Relations; Religion in Politics; Movements and Insurrections; and Gender. *Prerequisite: POLSC 120.* Distribution Requirements: IP, SB.

POLSC 336 *Politics and Culture in the Asia-Pacific*

A survey of politics in the East Asian region—including China, Japan, Korea, and Southeast Asia, with an emphasis on cultural legacies and their effects on contemporary political structures and processes. Using literature and film as well as textual sources, this course will examine the unique political and economic development of this region. Questions to be addressed include: Why have parts of Asia experienced such economic success but also economic downturns? How can we understand claims that Asian culture is incompatible with democratic forms of governance? What are the ways that citizens in these areas seek to make their political voices heard? Distribution Requirements: IP, SB.

POLSC 340 *Political Geography*

A study of the relationship between politics and the material environment in which we find ourselves. Both natural topography and the built environment play a major, if often overlooked, role in shaping economics, social interactions, and political decision making. Our study uses both theoretical and empirical tools to consider the link between geography and politics, covering a range of issues from urban design to electoral districts. Through discussion, papers, and direct observation of the environment, students develop a stronger understanding of how the material world shapes politics and individual subjectivity. Distribution Requirements: CL, SB.

POLSC 348 Direct Action Organizing

A study of ethics, strategies, and tactics of direct action organizing. In a democracy, individual citizens have the right to participate in decisions that affect their lives. Yet many political goals require the efforts of many to achieve, and, in many cases, there is little that individual citizens can do acting alone. Citizens must therefore learn how to identify shared concerns, how to coordinate with others, and how to harness the efforts of many to influence political decisions. This is the work of direct action organizing. We examine how direct action organizing can succeed and why it sometimes fails. Distribution Requirements: CL, SB.

POLSC 354 War and Peace in the Middle East

An examination of several types of conflicts – including revolutions, civil wars, interstate wars, and interventions – in the Middle East. Theories of each type of conflict are applied to specific cases. Peace processes are also analyzed and discussed in the context of resolving current regional crises. Through course readings, drawn from popular nonfiction, mainstream journals, and field-specific journals, students gain basic literacy in both qualitative and quantitative approaches to political science. *Prerequisite: POLSC 232 recommended.* Distribution Requirements: PD, SB.

POLSC 355 The Arab-Israeli Conflict

An examination of the history of Israeli-Arab relations from the late 19th century, with a focus on understanding why the conflict has been so intractable and the role played by third parties. Students read primary and secondary sources to explore both the historical background to the conflict and a wide range of perspectives on key issues. *Prerequisite: sophomore standing or higher recommended.* Distribution Requirements: IP, PD.

POLSC 371 Politics and Literature (also listed as ENGL 371)

A team-taught course that examines the intersection of *Politics and Literature* in a given situation. While the specific topic may change from year to year, the course seeks to transcend the disciplinary borders between Political Science and English by exploring the vital connections between system and story at a given historical moment. The course may be taken for credit in either Political Science or English. *Prerequisite: Permission of the instructors.* Distribution Requirements: HE, PD.

POLSC 380 Classical Political Thought

An analysis of selected texts from among the political theorists of antiquity with special attention paid to such themes as the nature and purpose of political life, the meaning of citizenship, problems peculiar to political action, and the character of the best regime. Readings are drawn from the works of dramatists, historians and philosophers such as Aeschylus, Sophocles, Thucydides, Plato and Aristotle. Recommended: POLSC 140 or POLSC 285. Distribution Requirements: HE, SB.

POLSC 382 Modern Political Thought

A study of selected modern political theorists, such as Machiavelli, Hobbes, Locke, Montesquieu, Rousseau, Burke, Tocqueville and J. S. Mill. Themes treated include the creation of the modern state and the meaning of sovereignty, the development of individualism and liberalism, the relation of the individual and the community, and the meaning and dynamics of democracy. Recommended: POLSC 140 or POLSC 285. Distribution Requirements: HE, SB.

POLSC 386 Chinese Political Thought: From Confucius to the New Left

An examination of the evolution of Chinese political thought from the 6th century BCE to the present. We examine ancient Chinese political theories, including the origin and legitimacy of the state, the roles of the monarch and the bureaucracy, and the Mandate of Heaven. We then focus on modern challenges to traditional Chinese thought and theories addressing the modern crisis of China, including utopianism and socialism, and recent debates in China on neo-Confucianism, neo-authoritarianism, and the New Left. Special attention is paid to the Chinese search for new models of governance and the relevance of tradition in the age of globalization. Distribution Requirements: IP, PD.

POLSC 412 U.S. Congress

An examination of the functions, rules, customs and procedures of the United States Congress. Topics include the relationship between the national legislature and other governmental institutions, as well as between Congress and the electorate and the lobbyists. Also taken up is an analysis of informal groups, the committee system, the leadership structure, and proposals for legislative reorganization. Distribution Requirements: CL, SB.

POLSC 413 U.S. Presidency

The changing conceptions and interpretations of the presidential institution and the styles and strategies of the American presidents. Topics include the selection process; the executive advisory system; and the relationship between the President, the press, the Congress and the public. Also covered are decision-making in the White House and the powers, tenure and accountability of the President. Distribution Requirements: CL, SB.

POLSC 427 The European Union

An introduction to the institutions and politics of the European Union. Topics include the history and development of the EU, the extent of Europeanization in particular policy areas such as antidiscrimination and monetary union, whether or the EU is a democratic institution, and the possible ascension of new member states such as Turkey. Distribution Requirements: CL, SB.

POLSC 450 The Politics and Psychology of Persuasion and Prejudice

An examination of issues in political psychology connected with persuasion and prejudice. The course will focus on topics of particular relevance to *U.S. Foreign Policy* and international politics such as political perception, propaganda, social-cultural explanations of economic prosperity, racism, and ethnocentrism. Completion of POLSC 251 is recommended but not required. Distribution Requirements: HE, PD.

POLSC 453 Deterrence Theory and Nuclear Defense

An examination of nuclear deterrence theories and their theoretical, political, technological and ethical problems. A historical and doctrinal review will be presented covering the impact of nuclear weapons on U.S. military and political affairs. Specific issues to be treated include nuclear proliferation, ethical dilemmas of nuclear deterrence, nuclear winter theories, inadvertent war, nuclear waste problems, nuclear abolition, and human radiation experiments. POLSC 251 is encouraged but not required. Distribution Requirements: IP, SB.

POLSC 457 National Security Controversies

An examination of contemporary controversies relating to national security. A brief overview of the field will be presented, followed by an exploration of key political, social, psychological, and technical problems facing the defense establishment. Specific issues to be treated are the role of women in combat, the growing rift in civil-military relations, the challenge of technological complexity in war, and contending views on the nature of future wars. POLSC 251 is encouraged but not required. Distribution Requirements: CL, SB.

POLSC 459 Civil Wars

An analysis of why civil wars occur, when they become prolonged, how they end, and other major questions relating to this increasingly common type of conflict. Students apply theories on civil wars to explain the dynamics of specific conflicts and draw on knowledge of specific cases to refine existing theories. Topics include: competition for natural resources, ethnic conflicts, mass killing and other humanitarian implications of civil wars, and the roles of third parties in conflict resolution. *Prerequisite: Prior coursework in Political Science is strongly recommended.* Distribution Requirements: PD, SB.

POLSC 482 Race and the American Political Mind

An exploration of the psychological, cultural and ethical implications of racism in a political order dedicated to the principle of human equality. Notable among such implications is what Ellison described as the ethical schizophrenia of the American mind. Readings will be drawn from the works of political theorists, social critics, and novelists such as James Baldwin, W.J. Cash, W.E.B. DuBois, Ralph Ellison, William Faulkner, Harriet Jacobs, Toni Morrison, Shelby Steele, Richard Wright and Cornel West. Distribution Requirements: IP, PD.

POLSC 484 American Conservatism

An examination of conservative political theory since World War II and its relation to the emergence of a new American Right. The course focuses on four moments: the role of post-war anti-communism in revitalizing remnants of various other conservatisms, the consolidation of these disparate traditions, especially under the rubric of William F. Buckley's *National Review*, reaction to the sixties and the emergence of neo-conservatism, and finally, the rise of Right-wing populism. Recommended: POLSC 285. Distribution Requirements: CL, HE.

POLSC 486 *The Death and Life of American Liberalism*

An examination of the evolution of American liberalism. Themes include the emergence of liberalism against the background of 19th century industrialism and the erosion of an earlier civic equality, the ascendancy of the liberal idea from the New Deal through the Great Society, the eventual loss of a coherent vision, and renewed prospects for an enduring liberal revival. The inquiry is framed by the question of the fate of American liberalism, its characteristic strengths and weaknesses, its dilemmas and myopias, and its roots in the American political tradition. Distribution Requirements: CL, HE.

POLSC 489 *Statistics and Data Analysis*

Techniques of quantitative analysis of social and political data. Topics include measurement, scaling, description, sampling, inference, and research design. Emphasis is on measures appropriate to nominal and ordinal variables and non-parametric techniques. Students will use the Statistical Package for the Social Sciences for computer analysis of archival data. *Prerequisites: the successful completion of MATH 110, or placement in mathematics courses above that level as determined by the Mathematics Placement Test, or permission of the instructor.* All students planning to pursue any form of graduate education are advised to take this course. Distribution Requirements: QR.

Undergraduate Internships

POLSC 500 *Internship*

Credit-bearing internships are available through the Political Science Department, often in coordination with the Allegheny Gateway. Credit, and work done to earn such credit, is at the discretion of the supervising faculty member. Typically, internships for credit are offered during the summer. Students should consult with the relevant faculty member for information, approval, and requirements.

POLSC 520 *Internship in Environmental Law and Regulation, Office of Chief Counsel, Northwest Region, Department of Environmental Resources, Commonwealth of Pennsylvania*

An internship that acquaints the student with the basics of legal research and writing. Phase One is conducted as a small class, concentrating on, but not limited to, environmental regulation. A second phase of the internship (available to a more limited number of students each semester) focuses on the civil and criminal aspects of environmental law and regulation in Pennsylvania. *Prerequisites: Approval of the faculty liaison, as well as basic familiarity with the U.S. legal system. An interview with a lawyer in the Office of Chief Counsel is required, as is ENVSC 110.* At least one course from POLSC 221, POLSC 343 or POLSC 347 is recommended. Phase One: Two semester hours. Phase Two: The student contracts for semester hour credit, generally two hours. Credit/No Credit basis only.

POLSC 529 *Internship: Political Science*

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

POLSC 580–POLSC 587 Seminars

A Political Science major or minor will satisfy the seminar requirement by taking a seminar in the POLSC 580–POLSC 587 series. If possible, the selection should be the seminar in the general area in which the student expects to do a Political Science Senior Project. It is recommended that the seminar selected for this purpose be taken in the junior year or, at the latest, in the first semester of the senior year. A major may take more than one seminar; one of them may be counted toward some other Political Science Department requirement. The POLSC 580–POLSC 587 seminars may be taken by non-majors with permission of the instructor. All seminars offered by the department are designed to expose students to methods of analysis and current research findings drawn from a subfield within Political Science. A research paper is required. *Permission of the instructor is a prerequisite for enrollment in all seminars.*

POLSC 590 *Independent Study*

A written proposal is to be submitted to the professor prior to the semester in which the course will be taken. *Prerequisite: Approval of the instructor from whose area the study is chosen.* One to four semester credit hours.

POLSC 600 Senior Project Proposal

Required of all majors in preparation for the writing of the Senior Project. The course, which may be taken either during the spring of the junior year or the fall of the senior year, results in the writing of a specific Senior Project proposal that is presented in conference to a two-person faculty committee. Graded basis only. Credit: Two semester hours.

POLSC 610 Senior Project

The Senior Project will be written in the semester following the POLSC 600 course. The project is supervised, read, and evaluated by a two-person faculty examining committee. *Prerequisite: POLSC 600.*

Sophomore Seminar

FSPOL 201 Communication in a Discipline

*Political Science**

An exploration of oral and written communication with a focus on communication within a specific academic field. Students investigate the conventions of communication in the discipline and the methods by which practitioners position their work within larger disciplinary contexts. *Prerequisite: FS 102.* The course must be taken on a letter grade basis.

*The topical material covered in this sophomore seminar varies from section to section and year to year. Some sections of this course may have additional prerequisites.

Psychology

Professors Knupsky (Chair), Chowdhury, Clark, Conklin, Connell Pensky, Cross, Dickey, Hancock, Heuchert, J.R. Hollerman, L. Jackson, Ozorak, Paulson, Pickering, Rutledge, Searle-White

Psychology is a field of inquiry devoted to understanding human thought and behavior. Although largely concerned with the study of humans, other animals are studied as well, often with specific interest in comparing their behavior to that of humans. Psychology is a blend of paradigms or ways of understanding. Some approaches view psychology as a science, while others emphasize the applied, eclectic nature of the discipline. Psychology has its roots and shares its goals with many neighboring fields such as philosophy, physiology and sociology. The Psychology Department faculty reflects the diverse nature of the discipline by representing a wide range of conceptions and interests in psychology.

Courses in the department address issues such as how our biological nature prepares us for the ways in which we behave; the impact of developmental tasks on our conceptions of who we are; the ways in which we learn, perceive, and remember; how individual differences develop and shape our lives; and the extent to which we are susceptible to social influences. The major program is designed to provide both breadth and depth in the field. Students take coursework in the basic principles and methods of psychology and from the major subfields. In addition, advanced courses provide in-depth work in areas of particular interest. The major in Psychology is designed to support students who wish to pursue the major as a liberal arts focus as well as those who plan to enter graduate school.

Psychology Learning Outcomes

Our discussion of the goals and objectives for the psychology major begins with a list of the **skills and abilities** that we view as being particular to students of this discipline. This list of skills and abilities is followed by a description of the particular **content** areas that we see as being essential to those who graduate from our program.

1. **Skills and Abilities.** Students who successfully complete a major in Psychology should be able to:
 - Evaluate and use current theoretical and research trends in psychology;
 - Design and implement a research study including the development of hypotheses that are testable within the context of acceptable research strategies;
 - Recognize the ethical aspects and implications of psychological research and practice;
 - Synthesize information arising from different sub-areas of psychology;
 - Understand the application of psychology to personal and social issues;
 - Recognize and understand the complexity of sociocultural diversity.
2. **Content.** It should be recognized that skills and content are inseparable. The skills mentioned above must be taught within the context of some content. Nevertheless, it is possible to distinguish between the material that is learned (content) and the processes used to learn and apply the material (skills). Students who successfully complete a major in Psychology should demonstrate:
 - An understanding of the various models of behavior (e.g., psychodynamic, behavioral, cognitive, biological, etc.);
 - Knowledge of the sub-areas of psychology;
 - Knowledge of various strategies for developing knowledge in psychology;
 - Knowledge of recent trends in psychology;
 - Knowledge of theory in at least one sub-area of psychology

The Psychology Major

The major field program in Psychology leads to the Bachelor of Arts or the Bachelor of Science degree. Students may elect to receive either degree. Both degrees require the completion of at least 44 credits in Psychology. All courses for the Psychology major must be taken for a letter grade.

Requirements:

1. PSYCH 110 *Foundations of Psychology*
2. PSYCH 206 *Research Methods in Psychology*

3. PSYCH 207 *Statistical Methods in Psychology*
4. One course from each of the three Core Area Categories:
 - a. Basic Processes (PSYCH 150–PSYCH 159)
 - b. Human Processes (Psychology 160–PSYCH 169)
 - c. Individual Differences (PSYCH 170–PSYCH 179)
5. Three four-credit courses at the 300 or 400 level, one of which addresses structures of power and privilege (“SPP”).

The following courses satisfy the SPP requirement:

 - PSYCH 350 *Clinical Psychology*
 - PSYCH 375 *Community Psychology*
 - PSYCH 423 *Gender and Families*
 - PSYCH 426 *Aging*
 - PSYCH 451 *Psychology of the African-American Experience*
 - PSYCH 452 *Psychology of Prejudice*
 - PSYCH 453 *Psychology of Women*
 - PSYCH 461 *Bilingualism and Second Language Acquisition*
 - PSYCH 464 *Psychology of Intergroup Conflict and Violence*
 - PSYCH 475/RELST 475 *Psychology and Religion*
 - PSYCH 480 *Food and Hunger in Society*
6. A Junior Seminar (PSYCH 550–PSYCH 589);
7. A Senior Project (PSYCH 600 and PSYCH 610; or PSYCH 620; or PSYCH 630)

The Psychology Minor

The minor program in Psychology requires the successful completion of a total of five courses (20 semester credit hours) as listed below. All courses for the Psychology minor must be taken for a letter grade.

Requirements:

1. PSYCH 110 *Foundations of Psychology*
2. PSYCH 206 *Research Methods in Psychology*
3. One course from each of **two** Core Area Categories:
 - a. Basic Processes (PSYCH 150–PSYCH 159)
 - b. Human Processes (PSYCH 160–PSYCH 169)
 - c. Individual Differences (PSYCH 170–PSYCH 179);
4. One four-credit course at the 300- or 400-level

Psychology Courses

Introductory Courses

These courses are designed to serve as an entry to the field of Psychology. Each course introduces psychological principles and applications.

PSYCH 102 *Sex and Gender*

A study of the impact of sex and gender on human experience, including relationships, well being, and role prescriptions. The validity of stereotypical assumptions about differences between females and males is examined. Models of gender socialization contrasting the relative importance of biology and culture are considered. Particular emphasis is given to the interactions among gender, status, and role expectations. Distribution Requirements: PD, SB.

PSYCH 103 *Drugs and Society*

This course provides an overview of basic pharmacological principles, discusses behavioral and physiological mechanisms of action of several classes of medicinal and recreational drugs, and surveys the factors thought to contribute to responsible and irresponsible drug intake. Distribution Requirements: SB, SP.

PSYCH 106 Educational Psychology

An introduction to the psychological theories that have influenced educational thought and shaped educational practice in American schools since the turn of the 20th century. Topics include Piaget's theory of cognitive development, Vygotsky's socio-cultural theory, behaviorism, information processing theory, constructivism, motivation and learning theory. Case studies and re-enactments of classroom scenarios are used to explore how each theory is applied in educational settings and to brainstorm solutions to educational problems. Distribution Requirements: CL, SB.

PSYCH 110 Foundations of Psychology

An introduction to five major sub-areas of psychology: human development, learning and memory, motivation and emotion, social behavior, and individual differences. Students become acquainted with the major methods of data collection such as laboratory experiments, field and case studies, and observation; with important theories including the behavioral, biological, cognitive, psychodynamic, and humanistic points of view; and with findings of each sub-field. Important concepts are exemplified by a study of selected topics and applied issues within each of the five areas. Distribution Requirements: SB, SP.

Core Courses

These courses are designed to provide an introduction to the major subareas of psychology. Although introductions, they also provide foundation in a specific area of theory and research within the general framework of psychology. Core courses are grouped in three categories; majors are required to take one course from each category.

Category A: Basic Processes

PSYCH 150 Sensation and Perception

An introduction to the phenomena and sensory processes that play a role in human visual and auditory perception. Topics include light and the visual pathways, contrast and contours, motion and space perception, color, depth and size, as well as perceptual development and learning. In addition, sound, the physiology of the auditory system, and language perception are examined. Particular concern is directed to the role of physiology and information processing models in understanding human perception. Extensive laboratory experiences that replicate some of the most important and often cited research in sensory and perceptual psychology are included as part of the course requirements. One laboratory period per week. Distribution Requirements: SB, SP.

PSYCH 152 Behavioral Psychology

A study of basic processes and concepts in the conditioning and learning of human and nonhuman behavior, including acquisition and extinction, stimulus discrimination and generalization, avoidance and punishment, biological constraints on learning, and the role of motivation in learning. Theoretical trends in issues such as mediation, attention, memory, and concept learning are also discussed. Clinical and educational applications of basic principles of learning are explored. In addition, laboratory operant conditioning studies are conducted. Two 50-minute lectures and two laboratory periods per week. Distribution Requirements: QR, SP.

PSYCH 154 Physiological Psychology

An examination of the relationships between brain function and behavior and the various methods by which physiological psychologists study these relationships. Content areas include basic neuronal physiology and brain anatomy, neural/endocrine interactions, methods in physiological psychology, control of movement, sexual development and behavior, sleep, ingestive behaviors, learning and memory, and physiological correlates of psychopathology. *Corequisite: PSYCH 155.* Distribution Requirements: SB, SP.

PSYCH 155 Physiological Psychology Lab

Introduction to the basic methods of brain investigation in physiological psychology via a set of experiments involving surgical and histological preparations. Designed to complement materials discussed in PSYCH 154. One laboratory period per week. *Corequisite: PSYCH 154.* Credit: Two semester hours.

Category B: Human Processes

PSYCH 160 Life Span Developmental Psychology

Theory and methods of understanding the nature of human development over the life span are compared and evaluated. Individual development is studied as a function of biological, social, and psychological factors. Life stages are examined and differences in individual experiences are evaluated in relation to social systems, such as family and community. Continuity and change are considered in terms of personality, identity, and roles. Cultural diversity in accomplishing developmental tasks is emphasized. Distribution Requirements: IP, SP.

PSYCH 162 Human Social Behavior

Social psychology is the study of how the individual affects and is affected by social situations. This course surveys the major topics, theoretical models, and applications in this area of psychology. Included are attribution, attitudes, interpersonal attraction, social influence, groups, aggression and sex roles. Distribution Requirements: SB, SP.

PSYCH 164 Cognitive Psychology

The study of human mental processes, including attention, perception, memory, language and problem solving. Course content includes cognitive strengths, such as creativity and expertise, and weaknesses, such as biases and mindlessness. Differences related to gender, age and culture are also considered. Distribution Requirements: SB, SP.

Category C: Individual Differences

PSYCH 170 Abnormal Behavior

An introduction to concepts and contemporary categories of abnormal behavior from several points of view: biological, behavioral, cognitive, psychodynamic and humanistic. Additional topics include consideration of how theoretical orientations guide contemporary research and reflect therapy techniques. Distribution Requirements: SB, SP.

PSYCH 172 Health Psychology

An introduction to the relation between behavior and physical, as well as mental, health. General psychological principles are studied as they apply to health behaviors including the role of behavior in the etiology and treatment of disease; problems with eating, drinking, sleeping, and sex; reactions to disease; and maximization of longevity and quality of life. Distribution Requirements: SB, SP.

PSYCH 176 Personality

An introduction to personality theory and research and how they can be used to understand ourselves and others. Applications of personality theories to psychotherapy, popular culture, and assessment of normal and abnormal personality are examined. Contributions of biology, family, and culture to personality development are considered. Distribution Requirements: SB, SP.

PSYCH 178 Positive Psychology

An examination of human strengths, caring, and helping behavior from the perspectives of emotions, motivation, traits, and environmental factors. Topics include personal and community well-being, coping and problem-solving, creativity, optimal performance, and altruism. Distribution Requirements: CL, SB.

Methodology and Statistics

These courses provide methodological background required for advanced coursework in psychology. Students planning to major in Psychology should begin this series in their sophomore year.

PSYCH 206 Research Methods in Psychology

The first course in a two-semester sequence in research methods and statistics in psychology. Topics include research designs (e.g., descriptive, correlational, quasi-experimental, and experimental), issues in research design and interpretation (e.g., reliability, validity, and controlling sources of variance), ethics in research, descriptive statistics, graphical methods of data presentation, an introduction to statistical data packages, writing the methods section of a scientific report, and literature searching in psychology. *Prerequisite: A core course in Psychology. Students are strongly encouraged to take PSYCH 206 and PSYCH 207 in sequential semesters.* Distribution Requirements: QR, SP.

PSYCH 207 Statistical Methods in Psychology

The second course in a two-semester sequence, focusing on statistical methods. Topics include probability and the logic of hypothesis testing, confidence intervals and effect sizes, parametric statistical tests (e.g., t-tests, ANOVA, and regression), nonparametric statistical tests, use of statistical data packages, and writing the results of a scientific report. *Prerequisite: PSYCH 206, completed with a grade of C- or better. Students are encouraged to take PSYCH 207 in the semester following PSYCH 206.* Distribution Requirements: QR, SP.

Advanced Topics Courses

Courses in this category are intended primarily for junior and senior Psychology majors. Majors are required to take any two courses from those numbered in the 300s or 400s.

Advanced Topics in Applied Psychology

PSYCH 350 Clinical Psychology

An overview of clinical psychology including: consideration of clinical psychology as a behavioral science and/or profession, origins and development of the field, models of clinical training, controversies regarding legal and ethical issues, and processing and communication of assessment data and procedures. Specialized topics or areas are studied and reported by students in some depth. These may include single or clusters of diagnostic categories; individual, group, and family therapy approaches; and community interventions. Topics vary from year to year. This course satisfies the structures of power and privilege (SPP) requirement for Psychology majors. *Prerequisites: PSYCH 206, and PSYCH 170 or PSYCH 172.* Distribution Requirements: PD, SB.

PSYCH 360 Health and Psychophysiology

The impact of psychological principles, stress, emotionality, personality, and self-defeating behaviors on health. The practice of health psychology is examined by analyzing psychological responses and the physiological concomitants involved. *Prerequisites: PSYCH 206, and PSYCH 170 or PSYCH 172. Corequisite: PSYCH 365.* Distribution Requirements: SB, SP.

PSYCH 365 Health and Psychophysiology Lab

A series of laboratory experiments in psychophysiology. Students learn to assess EMG, EOG, EDA, ECG, EGG, respiration, pulse, and blood pressure responses to psychological stimuli. Moreover students study the relationship of these responses to health. Designed to complement issues discussed in PSYCH 360. One laboratory period per week. Credit: Two semester hours. *Prerequisites: PSYCH 206, and PSYCH 170 or PSYCH 172. Co-requisite: PSYCH 360.* Distribution Requirements: SP.

PSYCH 370 Tests and Measurement

An introduction to the background and methodology of psychological and educational assessment. Discussion focuses on test theory, including reliability, validity, norms, and errors of measurement. Attention is given to selecting and evaluating devices intended for the assessment of mental ability, achievement, personality and interests. Controversies and issues in testing including cultural and ethical issues are considered. *Prerequisites: PSYCH 206 and any core course in Psychology.* Distribution Requirements: QR, SP.

PSYCH 375 Community Psychology

An exploration of community dynamics with attention to local and national issues. Various psychological perspectives are used to address such questions as: What makes communities work well? What challenges do communities face in the 21st century? How can communities support the well-being of all of their citizens? How do citizens mobilize available assets and resources? The course includes site visits and a community participation component. The final project involves community-based research and public presentation of the results. This course satisfies the structures of power and privilege (SPP) requirement for Psychology majors. *Prerequisites: one core course in psychology from either the Human Processes (160s) or Individual Differences (170s) category, and PSYCH 206.* Distribution Requirements: CL, SB.

PSYCH 380 Behavior Modification

A study of the application of basic research on behavior principles to real-world problems. This is accomplished through an in-depth reading of the research literature in behavior therapy as well as an examination of conceptual and ethical issues. Applied research design and behavior therapy techniques are presented as we study particular behavior problems. Topics

include: self-injurious behavior, health and wellness, safety, aggression, workplace performance, academic performance and classroom behavior, anxiety and drug abuse. *Prerequisites: PSYCH 152 or 416, and PSYCH 206.* Distribution Requirements: QR, SP.

PSYCH 400 Developmental Psychopathology

An exploration of the etiology, diagnosis, and treatment of developmental psychopathology in children. This involves applying developmental principles to the study of high-risk children to understand different pathways leading to emotional problems, maladaptive behavior, and developmental delays and disturbances. Different perspectives on childhood psychological disorders, in terms of theory, ethics, research, and assessment, are explored. The developmental courses of a range of childhood disorders are considered. The psychological, sociocultural, and biological factors that promote or hinder optimal development are examined through presentations, discussions, and lectures. *Prerequisites: PSYCH 206, and PSYCH 160 or PSYCH 170.* Distribution Requirements: SB, SP.

Advanced Topics in Behavioral/Physiological Psychology

PSYCH 401 Foundational Helping Skills: Research and Practice

An introduction to foundational helping skills, the interview process, and best practices in the field. Our study is based on a “beginning, middle, and end” model of the therapeutic process, which we examine through different theoretical perspectives. Students focus on cultivating helping and interviewing skills that can be applied within any area of psychology and review strategies for obtaining accurate information and avoiding bias in the interview. This class develops skills useful for graduate school in the helping field or for entry-level helping professions, and for those who want to develop listening skills essential for personal and professional success. This class includes both a lecture/discussion section and a lab section. *Prerequisites: Junior/Senior standing, a declared Psychology major, and permission of the instructor.* Distribution Requirements: SB.

PSYCH 405 Autism Spectrum Disorders

An examination of current research on clinical, developmental, and psychosocial issues surrounding autism spectrum disorders (ASDs). Students examine various aspects of ASDs including etiology, underlying brain functions, assessment procedures, formation of friendships and romantic relationships, current practices in providing treatment (including alternative therapies such as art therapy), debunking fad therapies, and representation of ASDs in popular media. The course also considers the impact of ASDs on individuals and their families and examine developmental disabilities from a cultural and social perspective. *Prerequisites: PSYCH 206 and one of PSYCH 160, PSYCH 162, PSYCH 164, or PSYCH 170.* Distribution Requirements: SB, SP.

PSYCH 410 Cognitive Neuropsychology

An exploration of current research and theory on human neuropathological conditions and animal models of these conditions as they pertain to brain function and behavior. The course emphasizes various methods for studying mechanisms that relate brain and behavior, critical analysis of relevant literature, ethical considerations in human and animal biomedical research, and the generation of proposals for research projects. *Prerequisites: PSYCH 206, and PSYCH 154 or BIO 380.* Distribution Requirements: SP.

PSYCH 411 Systems Neuroscience

An examination of our current knowledge of the neural processes underlying behavior and mental processes from the perspective of systems neuroscience. The focus is on how this perspective utilizes a combination of behavioral, electrophysiological, anatomical and biochemical approaches in order to increase our understanding of these processes. These issues are addressed through both the critical evaluation of the existing experimental literature and also the processes involved in the development of a research project utilizing these techniques. Current ideas regarding the processes involved in both normal and abnormal function in areas such as learning and memory, motivation, cognition and personality are discussed. *Prerequisites: PSYCH 206 and one of the following: PSYCH 154, BIO 380 or NEURO 110.* Distribution Requirements: SB, SP.

PSYCH 412 Verbal Behavior

An analysis of the acquisition of language and communication from a behavioral learning perspective. We examine in detail how forms of verbal behavior, such as speaking, listening, writing, and thinking, originate and are modified through

interactions with other members of the verbal community. Emphasis is placed on the function, rather than the form, of verbal behavior and communication. Specific topics include audience control over verbal behavior, the function of grammar and syntax in oral and written communication, thinking and other private forms of communication, and self-editing in thinking, writing, and speaking. *Prerequisite: PSYCH 152; corequisite PSYCH 416.* Distribution Requirements: QR, SP.

PSYCH 415 Behavioral Pharmacology

An in-depth examination of the methods used in the systematic discovery of clinically efficacious drugs. A central focus of this course is the techniques used to better understand the behavioral actions of drugs through laboratory analysis. Topics include the stimulus properties of drugs, drug effects on learning and memory, and how complex operant behavior may be altered by various drugs. Ethical issues concerning human and nonhuman research are also discussed. In addition, the course emphasizes a critical evaluation of relevant literature. *Prerequisites: PSYCH 206, and PSYCH 152, PSYCH 154, or BIO 380.* Distribution Requirements: QR, SP.

PSYCH 416 Experimental Analysis of Behavior

Designed to explore complex issues in the experimental analysis of behavior. Topics include matching equation and maximizing; conditioned motivative relations; rule-governed behavior; adjunctive behavior; schedule-induced behavior, and other aspects of operant behavior. In addition, the course provides the student with an overview of the applications of behavioral technology. *Prerequisites: PSYCH 206, and PSYCH 152 or PSYCH 415.* Distribution Requirements: QR, SP.

Advanced Topics in Developmental Psychology

PSYCH 423 Gender and Families

An examination of issues raised by the diverse roles that women, men, and children play in families. Although the primary focus is families in the United States, cross-cultural variations in family forms are also addressed. We pay particular attention to the social construction of gender in families, examining families in their social, economic, and political contexts. Topics include adult intimate relationships, ideologies of motherhood and fatherhood, the dynamics of power relations in families, and the impact of social policies on families' lives. This course satisfies the structures of power and privilege (SPP) requirement for Psychology majors. *Prerequisite: one core course in Psychology from the Human Processes (160s) category, or permission of the instructor.* Distribution Requirements: PD, SB.

PSYCH 426 Aging

A broad overview of aging and developmental issues occurring in later life. Topics covered include developmental theories, research techniques, and biological, psychological, and social aspects of aging. This course satisfies the structures of power and privilege (SPP) requirement for Psychology majors. *Prerequisites: PSYCH 206 and one other course in Psychology.* Distribution Requirements: PD, SP.

Advanced Topics in Cognitive Psychology

PSYCH 440 Psychology of Language

An exploration of important issues about language and its impact on people's perceptions of one another. Topics include the comprehension of spoken and signed languages in social contexts, the acquisition of language, analysis of styles and registers, the role of language in maintaining social structures, and the cognitive and social aspects of bilingualism. Special attention is given to the ways in which language can contribute to stereotypes, discrimination and conflict, as well as to understanding and cooperation. *Prerequisites: PSYCH 206 and PSYCH 160, PSYCH 162 or PSYCH 164.* Distribution Requirements: PD, SB.

PSYCH 441 Human Memory Processes

An examination of the encoding, storage, and retrieval processes of human memory: Special attention is given to classic and current models of memory from the fields of cognitive psychology and cognitive neuroscience. This discussion-oriented course critically examines arguments and techniques presented in primary sources. Topics covered include individual differences in memory, constructive memory, emotional memory, and memory across the lifespan. *Prerequisites: PSYCH 206, and PSYCH 164 or PSYCH 150.* Distribution Requirements: SB, SP.

Advanced Topics: General

Courses in this group are designed for junior and senior majors and non-majors alike. Prerequisites are specified in the course descriptions.

PSYCH 450 Contemporary Social Issues

An application of current psychological research and theory to selected contemporary social issues. Topics change yearly. Issues such as television and social behavior, sexual harassment, peace research, and conflict resolution will be examined. This course is a discussion course using original sources. *Prerequisite: One core course in Psychology.* Distribution Requirements: PD.

PSYCH 451 Psychology of the African-American Experience

An examination of a broad spectrum of theory, research, and practice that focuses on the study of the psychosocial experience of African Americans. Some of the themes addressed include: historical and philosophical foundations and research paradigms of African/Black Psychology, psychosocial legacies of enslavement, African/Black personality and identity, education and intelligence, and the psychosocial implications of Black popular culture. This course satisfies the structures of power and privilege (SPP) requirement for Psychology majors. *Prerequisites: PSYCH 110, or one core course in Psychology from either the Human Processes (160s) or Individual Differences (170s) category, or permission of the instructor.* Distribution Requirements: IP, PD.

PSYCH 452 Psychology of Prejudice

An overview of the theoretical perspectives, research methods, empirical findings, and practical applications of psychological research on prejudice, stigma, and intergroup relations. Topics include, but are not limited to, the development of prejudice among children, the role of cognitive, social, personality, and motivation factors in maintaining prejudice and stigma, the psychological consequences of prejudice and stigma, and strategies for reducing prejudice, stigma, and intergroup conflict. This course satisfies the structures of power and privilege (SPP) requirement for Psychology majors. *Prerequisites: PSYCH 110, or one core course in Psychology from either the Human Processes (160s) or Individual Differences (170s) category, or permission of the instructor.* Distribution Requirements: PD.

PSYCH 453 Psychology of Women

An examination of the physiological, emotional, developmental, social, and cognitive aspects of the female experience. Through discussion and lectures, we examine the similarities and differences between women and men, with an emphasis on experiences unique to women in Western society. Topics include current research, effects of media images, motherhood, gender stereotypes and biases, women and work, sexuality and love relationships, women's physical and mental health, violence against women, and women in later adulthood. This course satisfies the structures of power and privilege (SPP) requirement for Psychology majors. *Prerequisite: One course in Psychology or Women's, Gender, and Sexuality Studies (WGSS).* Distribution Requirements: PD, SB.

PSYCH 455 History of Psychological Theories

An examination of the historical roots of the various theoretical approaches adopted by modern psychologists. A major theme of the course is an examination of the conflict between advocates of introspection, or the study of human experience, and behavior observation, the study of human action. After a brief survey of classical contributions, the course concentrates on the 19th- and 20th-century theories ranging from Wundt, Freud and James to Bandura and Piaget. Consideration is given to how psychological theories are applied in the clinic and the workplace, and special attention is given to the developing division between applied and research psychology. Recommended for students going to graduate school. *Prerequisite: One core course in Psychology.* Distribution Requirements: IP, SP.

PSYCH 461 Bilingualism and Second Language Acquisition

An exploration of psychological research from the fields of bilingualism and second language acquisition (SLA). Topics include an examination of current cognitive models of bilingual language acquisition, production, and comprehension as well as the impact of cultural factors on bilingual language use and maintenance. In addition, approaches to second language instruction are considered with an emphasis on both in-class and immersion contexts. This course satisfies the structures of power and privilege (SPP) requirement for Psychology majors. *Prerequisite: PSYCH 110; or one core course in Psychology from either the Human Processes (160s) or Individual Differences (170s) category; or permission of the instructor.* Distribution Requirements: PD, SB.

PSYCH 464 Psychology of Intergroup Conflict and Violence

An examination of the processes underlying conflict and violence between groups, with an emphasis on Social and Political Psychology. By use of experiential activities, discussions, audiovisual material, and group work, we examine the nature of structural violence and proceed to discuss the dynamics behind conflict escalation and direct violence. Topics include the cognitive roots of conflict escalation, personality factors in aggression and violence, justification of violence, the psychology of torture and genocide, the role of women and children in armed conflicts, and what psychology can contribute to intergroup dialogue, contact, and post-conflict healing and reconciliation. This course satisfies the structures of power and privilege (SPP) requirement for Psychology majors. *Prerequisites: Permission of the instructor, or PSYCH 206 and one of PSYCH 160, PSYCH 162, or PSYCH 164.* Distribution Requirements: PD, SB.

PSYCH 466 Industrial/Organizational Psychology

A science-based examination of human behavior in work settings. Topics include recruitment, selection, training, and evaluation of employees; work motivation, job satisfaction, and stress; group processes and decision-making in the workplace; and the effects of physical and psychological environment, including work systems, on work behavior. An introduction to human factors research is included. *Prerequisite: One core course in Psychology or permission of the instructor.* Distribution Requirements: SB, SP.

PSYCH 475 Psychology and Religion (also listed as RELST 475)

An examination of Judeo-Christian religious belief and experience from psychological and religious studies perspectives. Cognitive, theological, historical-critical and psychodynamic theories will be explored and applied to empirical studies and biographical accounts of the faith lives of men and women, past and present. This course will be mainly discussion, based on primary sources. This course satisfies the structures of power and privilege (SPP) requirement for Psychology majors. *Prerequisites: One course each in Psychology and Religious Studies.* Distribution Requirements: HE, IP.

PSYCH 480 Food and Hunger in Society

Various perspectives—including psychological, biological, economic and sociocultural—are used to study in depth how human beings produce, select and use food. The objective is to understand how these perspectives converge to explain both individual and collective food choices and the ways in which those choices are affected by culture, gender and social class. The causes and consequences of excess and scarcity will also be examined. The course is discussion-oriented, with emphasis on primary sources, and includes a community activism component. This course satisfies the structures of power and privilege (SPP) requirement for Psychology majors. *Prerequisite: One core course in Psychology.* Distribution Requirements: IP, SB.

PSYCH 485 The Analysis of Data

A study that bridges the gap between a course or courses in statistics and the analysis of real data. Topics include: data documentation, data integrity, data structures, exploratory data analysis, outlier analysis, data transformation, power analysis, and the choice of statistical models based upon actual data. Dummy coding of variables for ANOVA and regression analysis are discussed; dummy coding of interactions in multiple regression is reviewed upon student demand. Students make extensive use of standard GUI statistical software and are introduced to the advantages and use of syntax editors that accompany GUI software. We also introduce a relatively user friendly power analysis program. Two semester credit hours. *Prerequisite: permission of the instructor and one of the following courses: PSYCH 207, BIO 385, ECON 202, ECON 203, MATH 345, MATH 346, or POLSC 489.* Distribution Requirements: QR, SP.

Internships

PSYCH 501 Internship at CHAPS

Liaison: Professor Heuchert

An internship at the Crawford County Center for Mental Health Awareness (CHAPS). CHAPS is an agency that provides a drop-in center, housing assistance, job training and other services for mental health consumers. The intern works with staff and consumers to assess satisfaction with services, conduct advocacy and education about mental health issues, and facilitate the work of the drop-in center. The student is jointly evaluated by the CHAPS staff and the faculty liaison: Credit: Two semester hours. *Prerequisites: PSYCH 170 and approval of the liaison. Corequisite: PSYCH 540.*

PSYCH 502 Internship at the State Correctional Institution, Cambridge Springs

Liaison: Professor Heuchert

An internship at the State Correctional Institution at Cambridge Springs (SCICS), a minimum-security women's prison. The intern works with the prison's treatment staff, observes group therapy and other group counseling techniques, typically in specialized group settings such as those for substance abusers or sexual offenders, and learns about the multidisciplinary approach to inmate rehabilitation. The student is jointly evaluated by the SCICS staff and the faculty liaison. Credit: Two semester hours. *Prerequisites: PSYCH 170 and the approval of the liaison. Corequisite: PSYCH 540.*

PSYCH 503 Internship at the Meadville Medical Center, Pain Management Center

Liaison: Professor Heuchert

An internship at the Pain Management Center at the Meadville Medical Center. The intern observes and/or participates in various aspects of the multidisciplinary treatment of chronic pain, including educational presentations, individual psychotherapy, physical therapy, biofeedback and medical procedures. The student is jointly evaluated by the Pain Management Center staff and the faculty liaison. Credit: Two semester hours. *Prerequisites: PSYCH 172 and the approval of the liaison. Corequisite: PSYCH 540.*

PSYCH 505 Internship in Psychological Research

Liaison: Professor Heuchert

Research experience at Allegheny College to be directed by any member of the Psychology Department. The completed project is evaluated jointly by the supervising faculty member and the liaison person. Credit: Two or four semester hours. May be repeated for credit. *Prerequisites: PSYCH 206 and PSYCH 207 and/or the approval of both the faculty liaison person and the faculty member in charge of the project.*

PSYCH 506 Internship in Surveying and Data Analysis

Liaison: Professor Heuchert

An internship with one or more local social service agencies in which the intern assists in the design, pre-testing, implementation, and evaluation of survey instruments. Additional responsibilities might include cataloguing, evaluation, and other data management procedures. Provides hands-on experience for students with research methods, statistics, and data management. May be repeated for credit. *Prerequisites: PSYCH 206 and PSYCH 207 and/or the approval of both the faculty liaison person and the faculty member in charge of the project.*

PSYCH 520 Internship at Bethesda Youth Services, Meadville

Liaison: Professor Heuchert

An internship in therapy and evaluation programs for delinquent and dependent adolescents in short-term or long-term residential group-home or settings. Students are evaluated jointly by the Bethesda staff and the faculty liaison and on the keeping of a daily journal. Credit: Two semester hours. May be repeated for credit. *Prerequisites: PSYCH 160 or PSYCH 170 and the approval of the liaison. Corequisite: PSYCH 540.*

PSYCH 522 Internship in Child Care

Liaison: Professor Heuchert

An internship at one of two child care sites: Meadville Children's Center or Head Start Meadville Branch. The internship 1) acquaints the student with a child care agency serving children four years of age and under; 2) enables the intern to observe normal physical, cognitive, and social-emotional developmental processes in young children; 3) involves the student in planning and implementing appropriate activities for infants, toddlers, and preschoolers; and 4) requires that the intern read current theory and research and reflect on social issues and public policies regarding young children and their families. The intern meets regularly with an agency administrator for discussion and supervision and confers regularly with the internship instructor to review assigned readings. The intern's performance is evaluated by the on-site supervisor in consultation with the supervising faculty member. In addition, the supervising faculty member will evaluate the student's journal, which integrates the on-site experiences with the assigned readings. Credit: Two semester hours. May be repeated for credit. *Prerequisites: PSYCH 160 and the approval of the liaison. Corequisite: PSYCH 540.*

PSYCH 525 Internship with Active Aging

Liaison: Professor Heuchert

Active Aging is a state-supported area office on aging that provides a wide variety of services to senior citizens living in Crawford County. The center provides congregate meals, home-delivered meals, educational activities, health-promotive services and activities, and social activities for active seniors. The student becomes involved in several facets of operating a center for older adults, from developing appropriate activities and services to implementing them. The internship involves selected readings and discussion with the on-site supervisor and staff. Professional performance is evaluated by the on-site supervisor in consultation with the supervising faculty member. The student's academic performance is evaluated via a journal of internship experiences and a research paper. Credit: Two semester hours. May be repeated for credit. *Prerequisites: PSYCH 160 and the approval of the liaison. Corequisite: PSYCH 540.*

PSYCH 527 Internship with Wesbury United Methodist Retirement Community

Liaison: Professor Heuchert

The internship provides students with an opportunity to observe and to be involved in the operation of a retirement community, as well as to interact with residents. Depending on the student's interest, the internship experience can be tailored to include, but is not limited to activities, programming, health advancement, community outreach, public relations, accounting, and administration. Performance will be evaluated jointly by the on-site supervisor and the supervising faculty member. Credit: Two credit hours. *Prerequisites: PSYCH 160 and approval of the liaison. Corequisite: PSYCH 540.*

PSYCH 529 Internship: Psychology

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

PSYCH 530 Internship in the Teaching of Psychology

Liaison: Professor Heuchert

Designed to provide practical teaching experience in a variety of Psychology courses, this internship involves working closely with an instructor in a particular course such as Introductory Psychology, Learning, or Physiological Psychology. Although the specific duties vary with the course involved, students may be asked to attend lectures, act as discussion facilitators, hold regular office hours, assist with laboratory sessions, and act as writing tutors. In addition to the practical work, the student intern meets on a regular basis with the supervisor to review his or her work. Interns are also exposed to some of the basic principles of learning and cognitive psychology as they apply to teaching and learning. Signature course. May be taken on Credit/No Credit basis only. Credit: One to four semester hours. May be repeated for credit. *Prerequisites: Permission of liaison and supervising faculty member.*

PSYCH 540 Internship Seminar

A corequisite course for all students participating in applied internships in the Psychology department (i.e., all internships except Psychology 505, 506, and 530). The course focuses on integrating students' internship experiences with their understanding of psychological theory and research. Students meet biweekly during the first two weeks and last two weeks of the semester and weekly during the balance of the semester. Topics such as ethics, appropriate workplace behavior, and relationships with supervisors and co-workers provide the focus of the early meetings, and the rest of the semester is devoted to examining students' internship experiences and the on-going ethical or practice issues. A paper and formal in-class presentation, assessing the relationship of the student's field experience to current psychological theory and research, are required. Credit: Two semester hours. May be repeated for credit. *Corequisite: Enrollment in any Psychology Department internship except PSYCH 505, PSYCH 506 or PSYCH 530.*

Junior Seminars

PSYCH 206 and PSYCH 207 and core courses are prerequisite to all seminars. Additional prerequisites are specified in course descriptions. Students are encouraged to take their seminar as a junior in preparation for the Senior Project.

Junior Seminars in Applied Psychology (Clinical, Applied Social and Health)

PSYCH 550 Junior Seminar: Clinical Disorders

An examination of current research and theory about the nature and qualities of psychological disorders, particularly those included in the Diagnostic and Statistical Manual of Mental Disorders. Topics may include the following: What are the relative strengths and weaknesses of correlational, experimental, and single case designs in clinical research? How can the psychological, social and physiological precursors of various disorders be understood in relation to one another? Can the effects of medication or psychotherapy be used as evidence for or against a particular cause for a disorder? The course may focus on adult or adolescent disorders and emphasizes close reading of selected primary sources, in-class discussion, and extensive writing, culminating in a detailed research proposal. *Prerequisites: PSYCH 206, PSYCH 207, and one of PSYCH 170, PSYCH 172, PSYCH 176 or PSYCH 178.*

PSYCH 553 Junior Seminar: Behavioral Research on Alcohol (also listed as GHS 553)

An examination of current research and theory in the area of alcohol studies. Issues related to alcohol use and abuse are approached through the complementary disciplines of psychology and epidemiology. Special emphasis is placed on prevalence, individual and public health consequences, and causal and contributory factors, as well as treatment and policy-based interventions. In addition, attention is paid to methodological issues in alcohol research, particularly research design and statistical methods. Our study emphasizes close reading of selected primary sources in psychology and epidemiology, in-class discussion, and extensive writing, culminating in a detailed research proposal. *Prerequisites: PSYCH 206 and PSYCH 207 and one of PSYCH 170, PSYCH 172, PSYCH 176, or PSYCH 178; or GHS 130 and one of BIO/GHS 321 or BIO 385. Permission of the instructor is also required.*

PSYCH 554 Junior Seminar: Developmental Issues of Adolescence and Young Adulthood

An examination of the theories, research, and empirical findings associated with biological, psychological, and social aspects of development in adolescence and young adulthood. Topics covered include issues surrounding identity, self-esteem, social and moral development, gender differences, family and peer relations, romantic relations and sexuality, influence of social media, and psychopathology. Examination of cultural variations in adolescent and young adulthood development is an underlying theme in most discussions. Our study emphasizes reading of selected primary sources, in-class discussion and presentation, and extensive writing, and culminates in a detailed research proposal. *Prerequisites: PSYCH 206, PSYCH 207, and one of PSYCH 160, PSYCH 162, or PSYCH 164.*

PSYCH 555 Junior Seminar: Behavior, Cognition, and Health

An in-depth examination of topics in the area of the effects of behavior and cognition on health and vice versa. Students prepare and discuss presentations on themes such as wellness, pain management, stress, and reactions to, and control of, disease. *Prerequisites: PSYCH 206, PSYCH 207, and one of PSYCH 170, PSYCH 172, PSYCH 176 or PSYCH 178.*

Junior Seminars in Physiology and Animal Behavior

PSYCH 557 Junior Seminar: Behavioral Mechanisms of Drug Action

A study of the various behavioral and environmental mechanisms by which drugs and other substances may alter behavior. Students examine the actions of drugs from a behavior and analytic perspective. Specific topics include the factors involved in the initiation and maintenance of self-administered drugs. Moreover, the students examine the status of behavioral pharmacology in the area of neuroscience, in addition to ethical issues. Of primary concern is the examination of the development of a scientific analysis of the effects of drugs on human and nonhuman behavior. *Prerequisites: PSYCH 206, PSYCH 207, and one of PSYCH 150, PSYCH 152 or PSYCH 154.*

PSYCH 558 Junior Seminar: Behavioral Neuroscience

Examination of research on basic neural processes underlying behavior and mental processes. Students engage in the examination and evaluation of research addressing questions regarding the neural bases of motivation, learning, and cognition. Various techniques are discussed, including electrophysiological, anatomical, and biochemical. The relevance of such basic research to clinical disorders is addressed. *Prerequisites: PSYCH 206, PSYCH 207, and one of PSYCH 150, PSYCH 152 or PSYCH 154.*

PSYCH 559 Junior Seminar: Clinical Neuropsychology

Examination of primary literature that addresses the etiology, diagnosis, treatment strategies, and experimental animal models of disorders of the human nervous system. Topics include neurodegenerative disorders such as Alzheimer's and Parkinson's diseases, schizophrenia, affective disorders, and injuries of the brain and spinal cord. *Prerequisites: PSYCH 206, PSYCH 207, and one of PSYCH 154+PSYCH 155, PSYCH 170, PSYCH 172, or NEURO 110.*

Junior Seminars in Human Processes

PSYCH 578 Junior Seminar: Well-Being

An exploration of the traits, states, and actions that promote happiness and resilience in individuals and communities. We take a discussion-oriented approach, with emphasis on close reading of primary sources and evaluation of recommendations for well-being in popular culture. Students do some data collection and analysis, culminating in a detailed research proposal. *Prerequisites: PSYCH 206, PSYCH 207, and one of PSYCH 170, PSYCH 172, PSYCH 176, or PSYCH 178.*

PSYCH 579 Junior Seminar: The Psychology of Social Class

An examination of current social science research and theory related to socioeconomic status (SES). Topics may include the operationalization of objective and subjective social status, the psychological and physiological impact of income inequality, intersectionality of SES and other identities (e.g., race, sexual orientation, religion), access to and experiences within higher education, and communicating social class research. Our study emphasizes close reading and in-class discussion/presentation of social psychology and behavioral economics research related to SES, culminating in students writing a detailed research proposal. *Prerequisites: PSYCH 162, PSYCH 206, and PSYCH 207.*

PSYCH 581 Junior Seminar: The Psychology of (Im)morality

An examination of the processes underlying immoral behavior with an emphasis on Social Psychology and adjacent fields like Philosophy, Social Neuroscience, and Behavioral Economics. Largely by means of reading and discussing peer-reviewed publications, we start by reflecting on different conceptualizations of morality and its importance to living in groups. We then explore various recent findings on who behaves immorally, why, and when. As importantly, we address several ways in which humans justify immoral and unethical behavior to themselves and others. Each student develops a research proposal over the course of the semester. *Prerequisites: PSYCH 206, PSYCH 207, and one of PSYCH 160, PSYCH 162, or PSYCH 164.*

PSYCH 582 Junior Seminar: Memory Processes

An examination of current research and theory in human memory processing. Specific topics may include the consolidation of memories, false memories, individual differences in memory, and the application of memory research to the classroom. Particular attention is paid to methodological issues in memory research. The course also emphasizes close reading of selected primary sources, in-class discussion, and extensive writing, culminating in a detailed research proposal for the senior project. *Prerequisites: PSYCH 206, PSYCH 207, and PSYCH 160, PSYCH 162, or PSYCH 164.*

PSYCH 584 Junior Seminar: Language Processes

An examination of current research and theory in discourse processing. Specific topics may include politeness theory, sarcasm, generation of insults, characteristics of instant-messaging and e-mail, development of slang, commitment language in therapy, rules of conversation, and speechlessness. The course emphasizes close reading of selected primary sources, in-class discussion, and extensive writing, culminating in a detailed research proposal. *Prerequisites: PSYCH 206, PSYCH 207, and one of PSYCH 160, PSYCH 162 or PSYCH 164.*

PSYCH 590 Independent Study

PSYCH 591 Group Study

PSYCH 592 Teaching in the Elementary or Secondary Schools

PSYCH 593 Peer Mentoring

Senior Project

Involves the completion of the Senior Project under the supervision of a Senior Project advisor and a second reader. Students meet regularly with the Senior Project advisor to discuss topics such as ethical standards for research, strategies for literature searches, organization and format of the project, and techniques for coding and interpreting data. Each student is required to have at least one meeting (termed the "Preliminary Conference") with both readers no later than the middle of the first semester of work on the project. An oral defense of the completed project is also required.

The Senior Project in Psychology may be completed in one semester for four credits (PSYCH 620 or PSYCH 630) or in two semesters for six credits (PSYCH 600 for two credits and then either PSYCH 610 or PSYCH 630 for four credits). Before registering for the Senior Project, students must submit a one-page research proposal, which is approved by the Senior Project advisor and second reader. This approval must be secured before students register for courses for their senior year. Departmental policies regarding the Senior Project are outlined on the Psychology Department's information web page. *Prerequisites: PSYCH 206, PSYCH 207, one Advanced Topics course and the Junior Seminar.*

PSYCH 600 Senior Project

First semester of a two-semester senior project. Two credits.

PSYCH 610 Senior Project

Second semester of a two-semester senior project. Four credits.

PSYCH 620 Senior Project

A one-semester senior project. Four credits.

PSYCH 630 Senior Project Seminar

A one-semester senior project or the second semester of a two-semester project, completed with a group of students with similar research topics. Four credits.

Sophomore Seminar

FSPSY 201 Communication in a Discipline

*Psychology**

An exploration of oral and written communication with a focus on communication within a specific academic field. Students investigate the conventions of communication in the discipline and the methods by which practitioners position their work within larger disciplinary contexts. *Prerequisite: FS 102.* The course must be taken on a letter grade basis.

*The topical material covered in this sophomore seminar varies from section to section and year to year. Some sections of this course may have additional prerequisites.

Religious Studies

Professors Boynton (Chair), Asmi, Holland, Krone, Mirza, Olson

No area of human thought or action falls outside the consideration of religious thinkers. Religious traditions teach about ultimate values and their relationship to our worldly lives. The study of religious rituals, practices, and systems of thought, both our own and others', helps us to understand the continually evolving relationship of the individual within those traditions as well as the role of religion in the complex global context. Some of the traditions studied in this major are the oldest extant bodies of thought and remain to this day some of the most vibrant and significant. The study of religion intersects with many fields, utilizing various methodologies and approaches while providing additional meaning to symbols, practices, and rhetoric that in turn enrich the work of other cognate disciplines.

Courses in Religious Studies are divided into three approaches to religion and are further differentiated by five main religious traditions. Religious Studies investigates the sources and texts, history and context, and the nature and relevance of religion embodied in these separate traditions.

Religious Studies Learning Outcomes

Religious Studies Major Learning Outcomes

Students who successfully complete a major in Religious Studies should be able to:

- Recognize and identify similarities and differences among various historical religious cultures and communities and the meaning of those similarities and differences for the religious beliefs and practices of the members of the respective communities;
- Read and comprehend (in translation) religious literature of various sorts within the context of the historical religious culture which gave rise to that literature and has in turn been shaped by it;
- Engage in critical analysis of religious phenomena, beliefs, and practices on the one hand, and conflicting interpretations of them on the other, while also recognizing the validity and value of those phenomena, beliefs and practices for those who adhere to them;
- Appreciate the mutual influence of culture and historical context and a given religious tradition, and how each may affect the other at different times and in different places, while also recognizing the continuity of the faith tradition throughout history;
- Articulate their own thoughts effectively both orally and in writing, exhibiting command of the preceding abilities in terms appropriate to the academic study of religion.

Religious Studies Minor Learning Outcomes

Students who successfully complete a minor in Religious Studies should be able to:

- Read and comprehend (in translation) religious literature of various sorts within the context of the historical religious culture which gave rise to that literature and has in turn been shaped by it;
- Engage in critical analysis of religious phenomena, beliefs, and practices on the one hand, and conflicting interpretations of them on the other, while also recognizing the validity and value of those phenomena, beliefs and practices for those who adhere to them;
- Articulate their own thoughts effectively both orally and in writing, exhibiting command of the preceding abilities in terms appropriate to the academic study of religion.

The Religious Studies Major

Religious Studies majors are required to have a GPA of at least 2.0 in the major. No more than eight credits in Religious Studies may be taken Credit/No Credit; two of these credits must be RELST 600, which is only offered Credit/No Credit.

The major in Religious Studies leads to the Bachelor of Arts degree and requires the successful completion of 42 semester credit hours in Religious Studies.

Requirements:

1. Approaches. A major program should include at least one course from each of the following approaches below. Specific courses may appear in multiple approaches, but double-counting courses for multiple approaches is not permitted.

A. Text

- RELST 115 *Religion in the Ancient Near East*
- RELST 130 *The New Testament*
- RELST 150 *Hinduism*
- RELST 160 *Buddhism*
- RELST 200 *Christian Ethics*
- RELST 222 *The Qur'an*
- RELST 229 *The Jewish Bible: How the Rabbis Read It*
- RELST 350 *Paul the Apostle*

B. Context

- RELST 117 *Religion in the Ancient Greco-Roman World*
- RELST 120 *The Faith of Ancient Israel*
- RELST 140 *Islam: Faith, History, and Culture*
- RELST 144 *Modern Islamic Movements*
- RELST 146 *Islam in America*
- RELST 147 *Judaism*
- RELST 150 *Hinduism*
- RELST 160 *Buddhism*
- RELST 165 *Zen Buddhism and Japanese Culture*
- RELST 170 *Religions of China*
- RELST 171 *Islam and Other Religions*
- RELST 180 *Religion in American Life*
- RELST 200 *Christian Ethics*
- RELST 224 *Jewish Theology and the Holocaust*
- RELST 250 *Medieval and Reformation Christianity*

C. Methodical analysis

- RELST 171 *Islam and Other Religions*
- RELST 175 *Contemporary Religious Thought*
- RELST 188 *Encountering the Other: Judaism's Relations with Christianity and Islam*
- RELST 204 *Introduction to Sociology of Religion*
- PHIL 212/RELST 212 *The Problem of the Self: East and West*
- RELST 215 *Marriage and Sexuality in Islam*
- RELST 224 *Jewish Theology and the Holocaust*
- PHIL 227/RELST 227 *Religion and the Challenge of Modernity*
- RELST 265 *Theory and Method in the Study of Religion*
- RELST 341 *Jewish Ethical Perspectives*
- ENVSC 360/RELST 360 *Religion and Ecology*
- PSYCH 475/RELST 475 *Psychology and Religion*

2. Traditions. In addition to the Approaches requirement above, the major should also include courses in **three** of the five different religious traditions listed below. Specific courses may appear in multiple traditions, but double-counting courses for multiple traditions is not permitted. Courses that satisfy the approaches requirement can also satisfy the traditions requirement.

A. Judaism

- RELST 120 *The Faith of Ancient Israel*
- RELST 147 *Judaism*
- RELST 188 *Encountering the Other: Judaism's Relations with Christianity and Islam*
- RELST 224 *Jewish Theology and the Holocaust*
- RELST 229 *The Jewish Bible: How the Rabbis Read It*

- RELST 341 *Jewish Ethical Perspectives*
- B. Christianity
 - RELST 130 *The New Testament*
 - RELST 200 *Christian Ethics*
 - RELST 250 *Medieval and Reformation Christianity*
 - RELST 350 *Paul the Apostle*
- C. Islam
 - RELST 140 *Islam: Faith, History, and Culture*
 - RELST 144 *Modern Islamic Movements*
 - RELST 146 *Islam in America*
 - RELST 171 *Islam and Other Religions*
 - RELST 215 *Marriage and Sexuality in Islam*
 - RELST 222 *The Qur'an*
- D. India/China/Japan
 - RELST 150 *Hinduism*
 - RELST 160 *Buddhism*
 - RELST 165 *Zen Buddhism and Japanese Culture*
 - RELST 170 *Religions of China*
 - PHIL 212/RELST 212 *The Problem of the Self: East and West*
- E. Ancient Mediterranean World
 - RELST 115 *Religion in the Ancient Near East*
 - RELST 117 *Religion in the Ancient Greco-Roman World*

3. RELST 580 Junior Group Tutorial

4. Senior Project, RELST 600 Senior Tutorial and RELST 610 Senior Project

5. Advanced Course Requirement. In addition to RELST 580, RELST 600, and RELST 610, which are required, students must take two courses above the 100 level and an additional course above the 200 level.

Majors in Religious Studies can take an approved cognate course from another discipline in fulfilling major requirements, which along with carefully chosen electives, can create an emphasis in a specific area of Religious Studies.

The Religious Studies Minor

A minor in Religious Studies consists of at least 20 semester credit hours of courses in Religious Studies, including at least one course above the 100 level and another course above the 200 level. The minor program should include two of the five different religious traditions listed above for the Religious Studies Major (Judaism; Christianity; Islam; India/China/Japan; Ancient Mediterranean World). Specific courses may appear in multiple traditions, but double-counting courses for multiple traditions is not permitted.

See also the minor in "Jewish Studies."

Religious Studies Courses

RELST 111 Biblical Hebrew (also listed as CLC 111)

An introduction to Biblical Hebrew. Students learn the Hebrew alphabet, become familiar with the basic paradigms of Hebrew nouns and verbs, and acquire at least 300 common Hebrew words. They apply their learning to prose passages taken from the Book of Judges and Genesis. In addition to learning the structure and grammar of Biblical Hebrew, students focus on key passages of the Biblical text that have been set to music in order to gain a cultural understanding of the passion and religious fervor of the ancient Biblical writers. Parallels to modern Hebrew vocabulary and syntax are noted. Distribution Requirements: HE, IP.

RELST 115 Religion in the Ancient Near East

An examination of religious beliefs, trends, and practices in ancient Egypt, Mesopotamia, and Syria-Palestine, from prehistory to the conquests of Alexander the Great. Topics include the history and development of the different religious

cultures, the role of sacrifice, kingship, prophecy, mythology, different ideas about the nature of the divine world, and the distinctions between “official” and “popular” religious culture. Students have an opportunity to read primary sources reflecting the diversity of religious beliefs and practices among the civilization of the ancient Near East. Distribution Requirements: HE, SB.

RELST 117 *Religion in the Ancient Greco-Roman World*

An examination of religious beliefs, trends, and practices in ancient Greece, the Hellenistic empire founded by Alexander the Great, and Rome and its empire, from prehistory to the reign of Constantine. Topics include the history and development of the religious cultures of Greece and Rome, the role of augury, astrology and magic, the philosophical challenge to traditional religion, the spread of the mystery religions in the Hellenistic era, and the origins and growth of the Jesus movement. Students have an opportunity to read primary sources reflecting the diversity of religious beliefs and practices among the Greeks and Romans. This course counts toward the Classical Studies minor. Distribution Requirements: HE, SB.

RELST 120 *The Faith of Ancient Israel*

An investigation of the faith and history of ancient Israel as chronicled in the Hebrew Bible (the Christian Old Testament). Both literary and historical critical methods are used to understand ancient Israelite religion and its gradual evolution into the faith that is the basis of Christianity as well as modern Judaism. Distribution Requirements: HE, SB.

RELST 130 *The New Testament*

A literary and historical critical examination of the various interpretations of Jesus Christ, his life and mission, as preserved in the writings of the New Testament. The New Testament is also investigated as an expression of the faith of the earliest Christian communities and as a reflection of the issues that concerned them. Distribution Requirements: HE, SB.

RELST 140 *Islam: Faith, History, and Culture*

An introduction to the Islamic faith through its history and its practices from the seventh century to the present. We consider the way Islam has adapted and changed through time and over different regions, balancing universal aspects of the faith with the particular adaptations encountered in the lived experience of Muslims. Using a variety of media, including music and art, we examine the voices of Arabic-speaking Muslims (in translation), but also Persian, Turkic, and American expressions. This course counts toward the International Studies major. Distribution Requirements: HE, PD.

RELST 144 *Modern Islamic Movements*

A study of modern Islamic movements arising in the 18th and 19th centuries as well as those that have appeared more recently. We examine the various movements' organizations, ideologies, evolution, and effectiveness. Special attention is paid to how various Islamic movements have attracted wide support and are similar to other social and religious movements. In particular, we study movements that receive significant recent media attention. Distribution Requirements: IP, SB.

RELST 146 *Islam in America*

A survey of the variety of Islamic adaptations in North America from the forced migrations of the first Muslims from Africa through present-day American Muslim youth cultures. The course examines the practices and self-understandings of the Nation of Islam and other so-called “Black Muslim” movements, as well as the impact of changes over time of racial constructions. Prior or current study in RELST 140 is recommended. This class counts towards the Black Studies minor. Distribution Requirements: HE, SB.

RELST 147 *Judaism*

A survey of the Jewish experience, examining the historic forces that shape the belief and practices of Judaism. We examine issues in Jewish life such as the relationships among God, Torah, and (the people) Israel through ritual, sacred literature, and theology. Topics include Jewish faith and practice, the Bible from a Jewish perspective, rabbinic literature, the importance of Zionism and the State of Israel, and movements within American Judaism. This course counts toward the International Studies major. Distribution Requirements: HE, PD.

RELST 150 *Hinduism*

An examination of the Hindu way of life from its origins to modern sectarian movements. Emphasis is given to the fundamental problems of human existence and their solution in the Upanishads, Bhagavad Gita and Puranic literature. Includes an examination of the importance of sacrifice, the sacramental and social structure of life, myth, the Hindu temple, puja, festivals and pilgrimage. Distribution Requirements: HE, IP.

RELST 160 *Buddhism*

An examination of the life and teachings of the Buddha, the rise of the Theravada and Mahayana schools, and the spread of Buddhism to Tibet and Japan (e.g. Pure Land and Zen sects). Major consideration is given to such issues as suffering, non-self, dependent origination, karma, rebirth, world renunciation, meditation and nirvana. This course counts toward the International Studies major. Distribution Requirements: HE, IP.

RELST 165 *Zen Buddhism and Japanese Culture*

An examination of the origin of Zen, its development in China, and its transmission to Japan forms the historical background for an investigation of the nature of Zen, its philosophy, method of attaining enlightenment, monastic life and important masters (e.g. the Sixth Patriarch, Dogen, Basho, Hakuin). The course also examines the influence of Zen on Japanese cultural phenomena like poetry, tea, painting, rock gardens and the martial arts. This course counts toward the International Studies major. Distribution Requirements: HE, IP.

RELST 170 *Religions of China*

A study of the major traditions of China, Confucianism, Taoism, Buddhism, and folk religion. The Chinese religion is considered on four levels: the personal, the family, community, state. The course concludes with a look at religion in contemporary China: Maoism and its decline and the Buddhist struggle to survive. This course counts toward the International Studies major. Distribution Requirements: HE, SB.

RELST 171 *Islam and Other Religions*

A study of Islam's interaction with major world religions such as Christianity, Judaism, Hinduism, and Buddhism. We examine how Islam theologically contrasts with other religions and how Muslim communities have lived among other religious communities for centuries. Special attention is given to how politics and the rise of the modern nation-state affect the relationship between various communities. A key question is how the different religions can be true to their own faiths while living in a peaceful pluralistic world. Distribution Requirements: HE, SB.

RELST 175 *Contemporary Religious Thought*

An introductory course exploring the basic issues and concerns in 20th century religious thought around the world and across traditions. Topics include: key religious figures; the place of religious thought in the contemporary world; religion, skepticism, and secularization; religion, violence, and conflict; religion and globalization; religious social ethics and political liberation; religious pluralism and diversity; religion and ecological crisis; religion and technology. Distribution Requirements: HE, SB.

RELST 180 *Religion in American Life*

A social history of Protestant, Catholic, and non-Christian groups in the U.S. context; the role of women and African Americans in various religions is included along with the emergence of sects and denominations, and the religious faiths of immigrant and ethnic populations. The course examines the inherent tension between the Protestant mainstream and the religious diversity resulting from the First Amendment guarantee of religious freedom. Distribution Requirements: HE, SB.

RELST 188 *Encountering the Other: Judaism's Relations with Christianity and Islam*

An investigation into the dynamics of Judaism's interactions with Christianity and Islam. We examine the ways in which these encounters influence the trajectory and the character of theology, religious doctrine, liturgy, and religious law in all three monotheistic traditions. Special attention is given to examining the interface between religion and politics as it affected Jewish communities living under Christian and Islamic rule. We also investigate the causes precipitating religious conflict and how these three traditions can remain authentically connected to their past while enhancing their relevance in the 21st century. Distribution Requirements: HE, SB.

RELST 200 Christian Ethics

An introduction to the study of Christian ethics considered within an ecumenical framework and across the broad span of the history of theology. Focusing on the primary issues that arise for any ethic that is identifiably Christian, this inquiry also involves learning to analyze and construct moral arguments. This course counts towards the Community and Justice Studies major and minor. Distribution Requirements: HE, PD.

RELST 204 Introduction to Sociology of Religion

A study of the religious roots of sociology and the religious application of the discipline since then. Students examine the work of Emile Durkheim, Max Weber, and Karl Marx, for whom religion was foundational subject matter, and then trace the evolution of the field, examining current theoretical models, recent case studies, and intersections with race, ethnicity, and gender. Students engage in fieldwork by making site visits to congregations in the area. Distribution Requirements: HE, SB.

RELST 212 The Problem of the Self: East and West (also listed as PHIL 212)

An examination of the problem of the self in a cross-cultural context. The Eastern traditions are represented by early Buddhism, the Advaita Vedanta philosophy of Sankara, Taoism and Zen Buddhism. The Western tradition is represented by the existential thought of Soren Kierkegaard, the dialogical philosophy of Martin Buber, the deconstructive theology of Mark C. Taylor, and others. *Prerequisite: At least one course in Philosophy or Religious Studies.* Distribution Requirements: HE, IP.

RELST 215 Marriage and Sexuality in Islam

A study of the various marriage and sexual practices in Islamic history beginning with pre-Islamic Arabia and ending with the modern Muslim world. We examine how Muslims understood sex, arranged sexual relationships, and structured marriage contracts. Special attention is paid to how Muslim women were placed within sexual relationships and how they navigated different cultural and religious rules to their advantage. Attention is also paid to modern attempts to reform Islamic law in an effort to seek greater gender equality. Distribution Requirements: HE, SB.

RELST 222 The Qur'an

An examination of one of the dominant scriptural sources in Islam, the Qur'an, in English translation. Through a close reading of the text, students study the ways Muslims draw on the text in prayer, find meaning from the text, and have used interpretations to provide meaning to new generations. Distribution Requirements: HE, IP.

RELST 224 Jewish Theology and the Holocaust

An examination of the character of God, revelation, and redemption by exposure to the enormous range of theological viewpoints and methods that have characterized Jewish theological reflection in modern times. Students study Holocaust theologians and theological reflections on the significance of the modern State of Israel as well as essays by prominent Jewish feminist theologians. Distribution Requirements: HE, SB.

RELST 226 Religion, Education, and Gender in the Middle East and North Africa

An examination of religion, education, and gender in the Middle East and North Africa. By reading ethnographic accounts of religious communities in the region, students explore how these communities grapple with issues of education and gender. Distribution Requirements: IP, SB.

RELST 227 Religion and the Challenge of Modernity (also listed as PHIL 227)

An exploration of the philosophical study of religion, particularly in light of the contest between traditional modes of religious expression and the rise of a critical mentality in the modern West. Issues to be addressed may include the ethics of belief, theories of rationality and their relevance to religion, the problem of evil, religious experience, and the epistemic status of belief in God. Distribution Requirements: HE.

RELST 229 The Jewish Bible: How the Rabbis Read It

An examination of the Hebrew Bible and the rabbis' unique process of interpretation called *midrash*. This course encourages a multi-faith conversation on the challenges posed by these texts to people of the twenty-first century and cultivates awareness of the contemporary relevance of the so-called "Old Testament." Scripture is approached as a source of practical wisdom that may form a basis for personal and collective self-understanding. This course counts toward the International Studies major. Distribution Requirements: HE, PD.

RELST 250 Medieval and Reformation Christianity

A study of various aspects of Western Christianity during the period from the 8th to the mid-17th century. The political, intellectual, and cultural developments of the medieval era and the Renaissance in Western Europe are studied in terms of how they affected, and were in turn affected by, the theological and institutional development of the Latin Church. The ideas of specific medieval and Reformation theologians are explored in depth to determine their contribution to the evolution of Western self-understanding. This course counts toward the Medieval and Renaissance Studies minor. Distribution Requirements: HE, SB.

RELST 265 Theory and Method in the Study of Religion

A critical examination of the different theories about the nature of religion and methodological approaches to the study of the subject from the 19th to the 21st centuries. Students study the origins of the discipline of Religious Studies in the quest for the origin of religion and the possibility of a science of religion as well as the various methods applied to the study of religion, including phenomenology, history, sociology, anthropology, psychology, ecology, biology, feminism, and postmodernism. Distribution Requirements: HE, SB.

RELST 341 Jewish Ethical Perspectives

A study of the ways that rabbinic Judaism is utilized by contemporary ethicists to challenge and stimulate thinking about what it might mean to be an ethical person in a post-modern age. In addition to examining conservative to liberal Jewish perspectives, we take a holistic approach that includes the views of Christian ethicists to illustrate commonalities and provide contrasts with a variety of Jewish ethical perspectives. Topics include abortion, capital punishment, euthanasia, ethics after the Holocaust, the ethics of exercising power, and other critical issues of our time. *RELST 147 is recommended.* Distribution Requirements: HE, PD.

RELST 350 Paul the Apostle

An examination of the life, works, and legacy of Paul of Tarsus within the context of the Jesus movement and early Christianity in the eastern Mediterranean during the first centuries of the Roman Empire. Students examine Paul's letters as literary products that reveal both the teachings and the personality of their author. Paul's influence on the Christian movement is considered through letters written by others but attributed to Paul, and through second, third, and fourth-century oral and literary traditions about Paul's missionary activities. Distribution Requirements: HE, SB.

RELST 360 Religion and Ecology (also listed as ENVSC 360)

An exploration of the intersection between religion and environmentalism, and how religion can both contribute to and help address environmental problems. Topics include religion's role in shaping human relationships with nature, and ecological themes that cut across religions and world views. In considering how religious communities can address environmental problems, students take part in service learning projects with local congregations or environmental groups. *Prerequisite: ENVSC 110 or at least one course in Religious Studies.* Distribution Requirements: HE, IP.

RELST 475 Psychology and Religion (also listed as PSYCH 475)

An examination of the Judeo-Christian religious belief and experience from psychological and religious studies perspectives. Cognitive, theological, historical-critical, and psychodynamic theories are explored and applied to empirical studies and biographical accounts of the faith lives of men and women, past and present. The course is mainly discussion, based on primary sources. *Prerequisites: One course each in Psychology and Religious Studies.* Distribution Requirements: HE, IP.

RELST 529 Internship: Religious Studies

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

RELST 580 Junior Group Tutorial

This course may not be taken on a credit/no credit basis.

RELST 590 Independent Study

RELST 591 Group Study

RELST 600 Senior Tutorial

A course involving preparation for the Senior Project such as preliminary research and project proposal. Credit: Two semester hours. To be taken on a Credit/No Credit basis.

RELST 610 Senior Project

A course consisting of the presentation and defense of the Senior Project.

Sophomore Seminar

FSREL 201 Communication in a Discipline

*Religious Studies**

An exploration of oral and written communication with a focus on communication within a specific academic field. Students investigate the conventions of communication in the discipline and the methods by which practitioners position their work within larger disciplinary contexts. *Prerequisite: FS 102.* The course must be taken on a letter grade basis.

*The topical material covered in this sophomore seminar varies from section to section and year to year. Some sections of this course may have additional prerequisites.

Sociology and Anthropology

Professor Asmi

Sociology and Anthropology Courses*

**Note: for students who matriculated before Fall 2016, Sociology and Anthropology courses count as Social Science for the purpose of satisfying the College distribution requirement then in effect.*

SOCAN 200 *Introduction to Cultural Anthropology*

An introduction to cultural anthropology: the study of human cultural variation across time and space. Topics include kinship, religious, economic, and political institutions. In addition, mechanisms and processes of social change are studied as well as such issues as colonialism, development, and modernization. Although a cross-cultural perspective is emphasized, a framework for examining western culture is also provided. Distribution Requirements: IP, SB.

SOCAN 201 *Introduction to Sociology*

An introduction to sociology, its history, language, and major subfields. Emphasis is placed upon sociological methods as the key to grasping the contributions of sociology to our understanding of human societies. Distribution Requirements: PD, SB.

SOCAN 529 *Internship: Sociology/Anthropology*

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

Spanish

Professors Dantán, Hernández, Herrera de La Muela, Riess, N. Smith

Allegheny College offers a major and minor in Spanish and instruction in the Spanish language through the department of Modern and Classical Languages. For Allegheny's Learning Outcomes for the study of modern languages, including Spanish, please see the "Modern and Classical Languages" section in this *Bulletin*.

Study Abroad

Students who major or minor in Spanish are encouraged to participate in the area studies program in Buenos Aires, Argentina; Quito, Ecuador; Querétaro, Mexico; or Seville, Spain. These programs offer courses in Spanish language, civilization and culture, literature, art history, politics and economics. Required courses for the major may be taken through participation in an approved program of study abroad with the exception of FSMLG 201, SPAN 580, SPAN 600, and SPAN 610.

The Spanish Major

Spanish majors are required to have a GPA of at least 2.0 in Spanish at graduation. Only Spanish courses taken at Allegheny on a letter-grade basis are included in the GPA calculation, and only the most recent grade is included for repeated courses. Only Spanish 600 may be taken on a Credit/No Credit basis. Courses taken in an approved program abroad may count for the major and minor. Native or near-native speakers of Spanish should consult with the Spanish Section Head about major/minor requirements.

The major in Spanish leads to the degree of Bachelor of Arts and requires a minimum of 42 semester credit hours, including:

1. SPAN 110, SPAN 120, SPAN 130, and/or SPAN 215 may be required depending on initial placement
2. FSMLG 201 *Academic Communication in Languages, Literatures, and Cultures* (see the "Modern and Classical Languages" section for course description). Double majors meeting their FS 201 requirement through another major should consult with their Spanish language major advisor.
3. SPAN 220 *Issues in Contemporary Spanish and Spanish American Culture*
4. SPAN 225 *Hispanic Texts*
5. SPAN 230 *Imperial Cultures*
6. Three 300-level classes in Spanish
7. One 400-level class in Spanish
8. SPAN 580 *Senior Seminar* (to be taken in the senior year)
9. The Senior Project: SPAN 600 and SPAN 610

Double majors who choose the language as the second major may complete only 40 semester credit hours. The senior thesis for a double major student must include an analytical component in Spanish that is relevant to a cultural, literary, or linguistic aspect of Hispanic studies; the Spanish component may or may not coincide with the thesis topic of the other major.

The Spanish Minor

A minor in Spanish requires completion of a minimum of 20 semester credit hours in Spanish as follows:

- SPAN 220 *Issues in Contemporary Spanish and Spanish American Culture* (four credits)
- SPAN 225 *Hispanic Texts* (four credits)
- SPAN 230 *Imperial Cultures* (four credits)
- Electives (eight credits). At least one of the elective courses must be at the 300-level.

See also the "Latin American and Caribbean Studies Minor."

Spanish Courses

SPAN 110 Beginning Spanish I

A study that stresses the spoken language while introducing the basic structural grammatical patterns of Spanish. It focuses on the acquisition of daily life vocabulary and basic communication skills. Students also begin to develop basic cultural awareness through the study of selected Spanish-speaking countries and authentic cultural materials. Three class meetings; one oral practice period a week. Distribution Requirements: IP.

SPAN 120 Beginning Spanish II

A study that stresses the spoken language while continuing to introduce more complex structural grammatical patterns of Spanish. It furthers the acquisition of vocabulary and basic communication skills. Students continue to develop basic cultural awareness through the study of selected Spanish-speaking countries and authentic cultural materials. Three class meetings; one oral practice period a week. *Prerequisite: SPAN 110 or appropriate score on placement test.* Distribution Requirements: IP, ME.

SPAN 130 Accelerated Beginning Spanish

A review of basic structural patterns of Spanish language that combines material from Spanish 110 and 120. Designed for students with previous experience with the language, our study reviews the use of daily life vocabulary and reinforces communication skills and cultural awareness through an examination of selected Spanish-speaking countries and authentic cultural materials. Three class meetings; one oral practice period a week. *Prerequisite: SPAN 110 or appropriate score on placement test.* Distribution Requirements: IP, ME.

SPAN 215 Intermediate Spanish

A review of communication skills with an emphasis on the application of acquired structures for more advanced language production. Students study Spanish-speaking regions through texts and movies. Three class meetings; one oral practice period a week. *Prerequisite: SPAN 120 or SPAN 130 or appropriate score on placement test.* Distribution Requirements: IP, ME.

SPAN 220 Issues in Contemporary Spanish and Spanish American Culture

A continued study of Spanish language through issues in contemporary Spanish-speaking societies. Students acquire vocabulary and develop facility with the language by discussion of present-day topics such as education, sports, music, crime, the environment, or religion as related to daily life. Phonetics and pronunciation skills and the use of grammatical structures necessary for improving written and oral fluency form an integral part of the content studied. *Prerequisite: SPAN 215 or appropriate score on placement test.* Distribution Requirements: IP.

SPAN 225 Hispanic Texts

Reading and discussion of selected texts by modern Spanish and Spanish American authors. Through an introduction to literary analysis, students develop reading, writing, and speaking skills in preparation for upper-level classes in literature and culture. *Prerequisites: Spanish 215 and either SPAN 220 or SPAN 230.* Distribution Requirements: HE, IP.

SPAN 230 Imperial Cultures

A study of Pre-Colombian and Spanish Empires designed to further develop students' speaking, reading, and writing abilities. The study of topics such as social structures and daily life, religion and agriculture, encounter and conquests, "courtly" life, syncretism, and the baroque helps students to develop an extensive vocabulary and make comparisons between social life in the past and today. *Prerequisite: SPAN 215 or appropriate score on placement test.* Distribution Requirements: IP.

SPAN 245 Spanish for Heritage Speakers

Designed specifically for native or heritage speakers of Spanish with oral proficiency but little or no formal training in the language. Our goals are to expand professional/academic vocabulary, to develop and improve writing and reading skills, and to provide bilingual students with linguistic tools that help them use their language skills in both English and Spanish to increase overall proficiency. Language skills are developed through an exploration of Latino culture and literature in the United States. *Prerequisite: Permission of the instructor.* Distribution Requirements: CL, PD.

SPAN 305 Conversation and Composition

Intensive discussion and writing on a variety of topical subjects in conjunction with readings of literary texts or periodicals. Includes exercises in phonetics. Designed to provide greater breadth and fluency in spoken and written Spanish. *Prerequisite:* SPAN 225. Distribution Requirements: IP, ME.

SPAN 315 Advanced Spanish Language Study

A close study of complex Spanish language structures and how to use them to improve comprehension and writing skills. Students develop language specific to the study of Spanish and demonstrate those skills in interpretative essays and class discussion. *Prerequisite:* SPAN 225. Distribution Requirements: IP, ME.

SPAN 320 Stories and Storytelling

An exploration of stories told in Spanish. Students study narrative form in a variety of genres in an examination of the important elements of storytelling, the relationship between a story and its historical context, and the importance of stories and storytellers to society. Texts and historical periods and themes may vary. As part of a final project, students may produce a story in their textual form of choice in Spanish. *Prerequisite:* SPAN 225. Distribution Requirements: HE, ME.

SPAN 325 Civilization and Culture of Spain

Readings and discussions concerning principal currents of Spanish civilization and culture across the centuries. Recommended prior to study abroad in Spain. *Prerequisite:* SPAN 225.

SPAN 330 Topics in Hispanic Popular Culture

An introduction to significant genres of contemporary Latin American or Spanish popular culture in three media: music, television, and print. Genres and countries vary according to instructor. *Prerequisite:* SPAN 225. Distribution Requirements: HE.

SPAN 335 Spanish American Civilization I

A study of the historical evolution of Spanish America from pre-Columbian times to 1810, providing both a political and cultural perspective. Recommended prior to study in Latin America. *Prerequisite:* SPAN 225. Distribution Requirements: HE, PD.

SPAN 345 Spanish American Civilization II

A study of the historical evolution of Spanish America from 1810 to the present, providing both a political and cultural perspective. Recommended prior to study in Latin America. *Prerequisite:* SPAN 225.

SPAN 360 Contesting Authority

A study of cultural production under authoritarian regimes in Spain and/or Latin America. Students examine the characteristics of cultural production created under these historical conditions through an analysis of texts that affirm and contest the dominant authority. Topics and texts vary according to instructor. May be repeated for credit with permission of the instructor. *Prerequisite:* SPAN 225. Distribution Requirements: HE, PD.

SPAN 365 Special Topics in Spanish Peninsular or Latin American Culture

An examination of Latin American or Spanish literary and cultural texts to enrich cultural knowledge, increase vocabulary, and reinforce grammatical and communicative structures with an emphasis on the craft of cultural commentary. *Prerequisites:* SPAN 225 and one 300-level Spanish course. Distribution Requirements: HE, IP.

SPAN 385 Introduction to Hispanic Culture through Film

An introduction to the study of movies and their representation of Spanish or Latin American culture. Through the study of influential films, students acquire the pertinent language to narrate and analyze cinematographic texts in Spanish and discuss them in their cultural context. Films vary according to instructor. May be repeated for credit with permission of the instructor. *Prerequisite:* SPAN 225. Limited to sophomores and juniors. Distribution Requirements: HE, IP.

SPAN 405 Translating Language and Culture

A study of the practice of translation from English to Spanish and Spanish to English. Students translate and compare translations of different types of texts in order to better understand differences in language structure and cultural

expression. Assignments may include translating business letters, advertisements, essays, stories, and poetry; subtitling video; summarizing critical articles; and critiquing peers' translations. *Prerequisite: Three 300-level Spanish courses or permission of the instructor.* Distribution Requirements: IP, ME.

SPAN 420 Nationalisms

A study of the emergence and establishment of cultural nationalisms in Spain or Latin America from the nineteenth century to the present. Students analyze the way in which writers and filmmakers portray the conflict between the state and its minority cultures. Students apply basic theoretical concepts to the representation of nationhood shown in each cultural text to develop advanced communication skills. *Prerequisite: Three 300-level courses in Spanish.* Distribution Requirements: HE, IP.

SPAN 430 Race, Gender and Power

A close examination of Latin American and/or Spanish texts (literature, film, and music, for example) to introduce students to the way in which gender and race are integral components in the struggle for power (including political, social, cultural, and economic power). Students continue to develop close reading skills and language proficiency as they analyze a range of power dynamics as represented in different cultural texts. *Prerequisite: Three 300-level courses in Spanish.* Distribution Requirements: HE, PD.

SPAN 440 Narrating Selves: Hispanic Literature in Contemporary Cultural Context

A study of the narrative form as vehicle for identity formation in Spain or Latin America. Through close readings of autobiography, testimonio, or novel, students analyze the rhetorical techniques used in exploring the formation of individual, minority group, national, or globalized identities. Topics vary according to instructor. *Prerequisite: Three 300-level courses in Spanish.* Distribution Requirements: HE.

SPAN 445 Topics in Hispanic Film

A study of significant filmmakers, national cinematographies, periods, and/or themes in Hispanic cinema. Topics vary according to instructor. May be repeated for credit with permission of the instructor. *Prerequisite: Three 300-level Spanish courses, including SPAN 385.* Distribution Requirements: HE, IP.

SPAN 485 Hispanic Film, From Text to Screen

An exploration of the adaptation of Latin American, Spanish, or Caribbean texts brought to the screen. Students examine short stories, journalistic accounts, novels, and/or screenplays and their filmic counterparts as an inquiry into the nature of verbal and visual representation. Special thematic focus may be given to the importance of construct of gender, class, or national identity in relation to the film's or text's specific context. Projects include book and film reviews, textual adaptation, or the shooting of a short film with digital cameras. *Prerequisite: Three 300-level courses in Spanish.* Distribution Requirements: HE, ME.

SPAN 529 Internship: Spanish

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

SPAN 580 Senior Seminar

An in-depth study of a significant author, theme, or text from Hispanic literature or culture. Topic varies from year to year. Readings and discussion in a seminar format model the process for completing a research project, which students prepare as a final assignment. *Prerequisite: Three 300-level courses in Spanish.*

SPAN 590 Independent Study

SPAN 592 Teaching in the Elementary or Secondary Schools

A field experience in education during which students work with teachers and students in elementary or secondary schools. Relevant readings, as well as discussions with the instructor and the supervising teacher, provide the background and context for the fieldwork. Students are required to keep a reflective journal and to complete a culminating project based on

Spanish

their experiences in the classroom. Offered on the Credit/No Credit basis only. Credit: Two to four semester credit hours.
Prerequisite: Permission of the instructor.

SPAN 594 Teaching at College

A field experience in which students work with a language professor and college students learning Spanish at Allegheny. Relevant readings, as well as weekly discussions with the instructors, provide the background and context for the fieldwork. Students are required to keep a reflective journal and complete a final project on their experiences in the classroom. Two to four semester credit hours. *Prerequisites: At least one 300-level Spanish course and permission of the instructor.*

SPAN 600 Senior Project I

Preparation of a Senior Project proposal based on the development of a thesis statement, a short description of the project, and a relevant annotated bibliography. Credit/No Credit basis only. Credit: Two semester hours.

SPAN 610 Senior Project II

Completion and oral defense of the Senior Project. *Prerequisite: SPAN 600.*

Sophomore Seminar in Modern Languages

FSMLG 201 Academic Communication in Languages, Literatures, and Cultures

An introduction to research and communication in the disciplines of Modern Languages. Through close work with a small number of texts and cultural topics, students engage with the norms and processes of research, including the development of appropriate topics; the location, evaluation, use, and citation of secondary sources; the incorporation of these sources into their own analyses; and the communication of these analyses in writing and speech as part of a scholarly conversation. While given in English, our study prepares language majors for research in the target language, including in the Junior/Senior Seminar and Senior Project. *Prerequisites: Two language courses at Allegheny College or permission of the instructor.*

Theatre: see “Communication Arts”

Women's, Gender, and Sexuality Studies

Professors Bailey (Chair), Caballero, Dickey, Hellwarth, McCullough, Riess, Shaw, Werner, Wesoky, Yochim

Women's, Gender, and Sexuality Studies (WGSS) is an interdisciplinary program that is interdivisional. It is designed to foster intellectual development in: the study of women, gender, and sexuality in local, national, and global contexts; the intersectional analysis of gender, race, class, sexuality, nation, age, and ability; power, systems of privilege, and resistance; and the links between feminist and queer theory within analyses of everyday life and social change. Drawing on multiple perspectives, methods, and theoretical frameworks, the program teaches critical thinking through cultural analysis, logical reasoning, abstract thinking, and argumentation while engaging students in self-reflection and asking them to apply knowledge for social transformation and engaged citizenship. The objectives of the major are 1) to provide a coherent body of scholarship in the fields to examine women, gender and sexuality; 2) to analyze critically the hierarchies and cultural stereotypes based on difference and diversity that shape our lives; 3) to analyze critically historical events; socio-political, cultural, and scientific perspectives; and creative works, all key to understanding feminist and queer studies; and 4) to provide instruction in research methods for investigating women, gender and sexuality.

WGSS draws upon the disciplines of Art, Biology, Dance & Movement Studies, Communication Arts, Economics, English, Environmental Science, History, Modern and Classical Languages, Philosophy, Political Science, Psychology, and Religious Studies. It permits flexibility in course selection so that students' individual interests and needs are met, while at the same time encouraging a developmental and substantively focused approach to understanding Women's, Gender, and Sexuality Studies as an academic field.

Note: students may not complete programs in both Women's Gender, and Sexuality Studies and Women's Studies, nor in both Women's Gender, and Sexuality Studies and Lesbian, Gay, Bisexual, and Transgender Studies.

Women's, Gender, and Sexuality Studies Learning Outcomes

Students in the Women's, Gender, and Sexuality Studies Program are expected to achieve Learning Outcomes in two areas: Content and Theories, and Research Methods.

Content and Theories

- Show how critical analysis of gender and sexuality contributes to an understanding of the historical and contemporary formations of patriarchy, heteronormativity, and gender normativity;
- Achieve a knowledge base about women's and LGBTQ+ people's role in history—their contributions, oppression, and resistance;
- Describe the manner in which race, class, gender, and sexuality intersect;
- Become aware of women's and LGBTQ+ people's experience in cultural contexts, both nationally and globally, including understanding the roles of gender and sexuality in social justice movements around the world;
- Define and describe a range of theories that underlie feminist and queer analysis, understanding their similarities and differences;
- Describe how theories reflect the historical and cultural context in which they emerge.

Research Methods

- Utilize feminist and queer methodological approaches and explain their role in building knowledge;
- Compare and contrast different feminist and queer theories and methodological approaches;
- Critique scholarly works from a feminist and queer theoretical and methodological standpoint;
- Develop a working knowledge of the connections between women's studies and queer studies scholarship, activism, and social change.

The Women's, Gender, and Sexuality Studies Major

A major in WGSS leads to the Bachelor of Arts degree and requires the completion of a minimum of 40 semester credit hours, of which at least 12 must be at the 300- or 400-level. At graduation, WGSS majors are required to have a GPA of at least 2.0 in fulfillment of major requirements. All Allegheny courses required for a WGSS major must be taken on a letter-

grade basis are included in the GPA calculation with the exception of repeated courses, for which only the most recent grade counts.

Because this major is interdivisional, students may complete any minor to satisfy the college requirement that the major and minor be in different divisions.

All courses marked with an asterisk (*) below have prerequisites.

Requirements

1. Core Courses

All majors must take the following core courses:

- WGSS 100 *Introduction to Women's, Gender, and Sexuality Studies*
- Either WGSS 210 *Social Movements in Women's, Gender, and Sexuality Studies* or WGSS 211 *Queer Lives*
- WGSS 300* *Feminist and Queer Theory*
- WGSS 400* *Global Feminisms*
- WGSS 580* *Junior Seminar in Women's, Gender, and Sexuality Studies*
- WGSS 620 *Senior Project*

2. Electives

In addition to the Core Requirements listed above, WGSS majors must take 16 credits of electives selected from the lists below. At least eight out of the 16 elective credits must come from program based and/or discipline-focused courses, and at least four of the elective credits must be at the 300 or 400 level. At most four credits from the internship courses WGSS 501, WGSS 502, WGSS 503, and PSYCH 540 may count toward the elective requirement.

A. Program Courses:

- WGSS 207 *Human Sexual Identities*
- WGSS 255 *Women and Migration*
- WGSS 275 *Bodies in American Culture*
- WGSS 306 *Cultural and Evolutionary History of Sexuality*
- WGSS 310* *Gendered Violence*
- WGSS 410* *Critical Perspectives in Global Women's Health*
- WGSS 501* *Internship: Women's Services I.* (Note: PSYCH 540 is a co-requisite for this course and may be counted as elective credit towards the WGSS major.)
- WGSS 502* *Internship: Women's Services II.* (Note: PSYCH 540 is a co-requisite for this course and may be counted as elective credit towards the WGSS major.)
- WGSS 503* *Internship: Women's Prison.* (Note: PSYCH 540 is a co-requisite for this course and may be counted as elective credit towards the WGSS major.)

B. Discipline-Focused Courses:

- ART 330* *The Renaissance Woman*
- COMRT 251 *Gender in Public Communication*
- COMRT 331* *Bodies and Health in Public Communication*
- COMRT 351* *Media and Identity*
- ENGL 211* *Women and Literature*
- ENGL 324* *Latino/a Literature*
- ENGL 415 *Topics in Literature of the Middle Ages*
- HIST 261 *A Survey of American Women's History*
- HIST 337* *History of American Masculinity*
- HIST 339* *Problems in the History of American Women*
- HIST 353* *Women and Revolution in China*
- HIST 562* *The Family in American History*
- PSYCH 102 *Sex and Gender*
- PSYCH 423* *Gender and Families*
- PSYCH 453* *Psychology of Women*

C. Other Electives

- ART 249* *Art Since 1945: The Road to Post-Modernism*
- COMRT 277 *Video Activism: History, Theory, Politics and Practice*
- COMRT 336* *The Visual in Public Communication*
- COMRT 465* *Media and Cultural Theory*
- COMRT 471 *Theories of Identity and Representation*
- DMS 470 *History of Contemporary Dance*
- HIST 380* *Disease and Medicine in Modern History*
- HIST 571* *The Civil Rights Movement*
- HIST 584* *Doctors and Deviants*
- PHIL 210 *Oppression and Liberation*
- POLSC 303 *Constitutional Law: Civil Rights and Civil Liberties*
- PSYCH 452* *Psychology of Prejudice*

The Women's, Gender, and Sexuality Studies Minor

The minor requires the completion of 24 semester credit hours. All courses marked with an asterisk (*) below have prerequisites.

Requirements:

1. **Core Courses.** All minors must take the following core courses:
 - WGSS 100 *Introduction to Women's, Gender, and Sexuality Studies*
 - Either WGSS 210 *Social Movements in Women's, Gender, and Sexuality Studies* or WGSS 211 *Queer Lives*
 - WGSS 300* *Feminist and Queer Theory*
 - WGSS 580* *Junior Seminar in Women's, Gender, and Sexuality Studies*
2. **Electives.** Minors must take eight credits of electives from the Program and/or Discipline-Specific courses listed under the electives for the WGSS major requirements. At most four credits from the internship courses WGSS 501, WGSS 502, WGSS 503, and PSYCH 540 may count toward the elective requirement.

All Allegheny courses required for a WGSS minor must be taken on letter grade basis and are included in the GPA calculation with the exception of repeated courses, for which only the most recent grade counts.

Because this minor is interdivisional, students may complete any major to satisfy the college requirement that the major and minor be in different divisions.

Womens, Gender, and Sexuality Studies Courses

WGSS 100 *Introduction to Women's, Gender, and Sexuality Studies*

An introduction to the field of women's, gender, and sexuality studies that delineates some of the parameters and interdisciplinary connections in feminist and queer scholarship. Alongside discussions of women's contemporary lives, students explore key social institutions and systems of power, oppression, and difference. We focus on the ways in which gender and sexuality are culturally constructed, with an emphasis on the intersections of identities, including gender, class, race, sexuality, ability, religion, and nationality. Distribution Requirements: HE, PD.

WGSS 207 *Human Sexual Identities*

An examination of the psychological and biological factors that influence human sexual development and identity. Concepts and expressions of human sexuality are considered from psychological and anthropological perspectives. The biological (e.g. evolutionary, physiological, neurobiological, and genetic) influences on human sexual development and function will also be addressed. Distribution Requirements: HE, PD.

WGSS 210 *Social Movements in Women's, Gender, and Sexuality Studies*

A consideration of women's, gendered, and queer identities, roles, experiences, and ideologies in order to understand the foundations of historical and contemporary U.S. social movements. Students explore the ways in which events, institutions,

politics, economics, the law, and/or cultures have both influenced and been influenced by public demands for social change. Topics may include: History of Sexuality, History of Feminism in the United States, Gay Liberation Movements, Women of Color in the United States, Black Women and Activism, Comparative Social Movements, Feminist Media Activism, Feminist Art Activism, and Women and Labor Movements. Distribution Requirements: CL, PD.

WGSS 211 *Queer Lives*

An exploration of a broad range of queer issues and the lived experiences of sexual minorities in the United States. Students examine major events in the history and social construction of lesbian, gay, bisexual, transgender, transsexual, and queer communities, with the goal of understanding the role of power and privilege in constructing sexual identities. We consider how queer lives have been inflected by differences like race and class and how the struggles of sexual minorities have shaped larger cultural discourses around family, intimacy, law, and social change. Distribution Requirements: CL, SB.

WGSS 255 *Women and Migration*

An introduction to why women migrate, how they experience life in a new culture, and their contributions to the receiving country. The United Nations reports that "one of the most significant trends in migration has been the entry of women into migration streams that had heretofore been primarily male" and that half of migrants today are women. We examine who is moving around the most and why, how belonging and a sense of "un-belonging" structure women's citizenship, how immigrant status is tied to work and family, how political policies affect where and how women move, and how policies are tied to race, class, sexuality, and nationality. Distribution Requirements: IP, PD.

WGSS 275 *Bodies in American Culture*

An introduction to how we understand the gendered, sexualized, and racialized body in American culture, examining the socio-cultural and political forces that shape bodies and bodily experiences; how different bodies are perceived, valued, and treated; and how people resist. In addition to core readings in women's, gender, and sexuality studies, we draw on sociology, science/medicine, history, art, cultural studies, media studies, ethnic studies, and black studies to explore how the body is constructed in scientific and medical discourse, fat studies, disabled bodies, transgendered bodies, and women's sport culture in the United States. Distribution Requirements: HE, PD.

WGSS 300 *Feminist and Queer Theory*

A study of contemporary feminist and queer theories with an emphasis on their shifting conceptualizations of gender, race, class, sexuality, and nationality. Students engage with key, original theoretical texts that examine core concepts of identity and difference, power and privilege, social structures and agency, and institutional and grassroots change. Emphasis is placed on putting feminist and queer theories into conversation with one another in order to understand their interdependent relationship. *Prerequisites: WGSS 100 and WGSS 210 or WGSS 211.* Distribution Requirements: HE, PD.

WGSS 306 *Cultural and Evolutionary History of Sexuality*

An examination of sexuality from evolutionary, historical, and cultural perspectives. This discussion-based class takes an interdisciplinary approach to understanding the biological and cultural bases of human sexuality, sexual identities, and sexual practices. Topics include homosexuality, bisexuality, intersexuality, transgender and transsexuality, heterosexuality, female orgasm, and adultery. Distribution Requirements: PD, SB.

WGSS 310 *Gendered Violence*

An exploration of how identity, socio-historical shifts, cultural production, and geo-political systems provide frameworks for understanding gendered violence. Violence is accomplished through a wide range of socially institutionalized and individually perpetuated events and circumstances and takes place across (and within) racial, ethnic, sexual, and national communities. We examine theoretical frameworks that discuss these differences in U.S. and transnational contexts, how violence is represented in popular culture, and the role the state plays in maintaining and intervening in violence. We conclude with examples of how scholars, artists, and activists take action to create social change. *Prerequisite: WGSS 100.* Distribution Requirements: PD, SB.

WGSS 400 *Global Feminisms*

A study of feminisms from around the world that analyzes transnational theory and practice and/or interrogates global politics through feminist lenses. We raise questions about systems of power based on investigations of nationality, race, class, gender, sexuality, and religion by drawing on feminist theory and specific case studies. Possible topics include

colonialism and postcolonialism, imperialism, genocide, sex trafficking and slavery, sex work, violence against women, reproductive health, migration and citizenship, war and its attending peace movements, women and labor, global queer communities and movements, environmental issues, women in politics, and religious and artistic expression. *Prerequisites: WGSS 100 and WGSS 210 or WGSS 211; or permission of the instructor.* Distribution Requirements: IP, PD.

WGSS 410 Critical Perspectives in Global Women's Health

An overview of the theoretical foundations for framing global women's health issues. We examine the systemic and cultural barriers that prevent access to health care and well-being as well as how professionals, community justice workers, and women themselves advocate for more than mere access. We synthesize approaches in women's studies, global health, political science, environmental studies, sociology, anthropology, political economies, art, and history to think transnationally about global women's health. We pay particular attention to medical models, education, reproduction/sexual health, the environment, and sex work. *Prerequisite: WGSS 100.* Distribution Requirements: IP, PD.

WGSS 501 Internship: Women's Services I

A two-semester internship at Women's Services, a non-profit social service agency for women and children in Crawford County. Students complete the Women's Services volunteer training during part one of the internship and participate in one or more aspects of the organization's program: advocacy, support, information and referral, community education and crisis intervention. The intern meets regularly with the agency administration for discussion and supervision and has regular conferences with the internship instructor. The intern's performance is evaluated by the on-site supervisor in consultation with the supervising faculty member. In addition, the supervising faculty member evaluates the student's written work consisting of a journal integrating on-site experience with assigned readings. In the context of the corequisite, PSYCH 540, the student develops an in-depth research project. The student is expected to take Women's Services Internship II the following semester. The sequence may be begun in either the Fall or Spring semester. Two credit hours. *Prerequisites: WGSS 100, PSYCH 102 or PSYCH 160, and/or approval of the supervising faculty member.* Corequisite: PSYCH 540.

WGSS 502 Internship: Women's Services II

An extension of Women's Services Internship I in which the student continues participation in the agency's program and completes the research project, as described above. Two credit hours. *Prerequisite: WGSS 501.* Corequisite: PSYCH 540.

WGSS 503 Internship: Women's Prison

An internship at the State Correctional Institution at Cambridge Springs (SCICS), a minimum-security women's prison. The intern works with the prison's treatment staff, interacts with inmates, observes group therapy and other group counseling techniques (such as those for learning parenting skills or treating substance abusers or sexual offenders) and learns about the issues involved in the incarceration of women, as well as the multidisciplinary approach to inmate rehabilitation. Credit: Two semester hours. *Prerequisites: WGSS 100 and approval of the faculty liaison.* Corequisite: PSYCH 540.

WGSS 529 Internship: Women's, Gender, and Sexuality Studies

Academic study completed in support of an internship experience with a partner institution. An Allegheny faculty member assigns and evaluates the academic work done by the student. Credit: One to four semester hours. *Prerequisite: permission of instructor.*

WGSS 580 Junior Seminar in Women's, Gender, and Sexuality Studies

A capstone seminar that engages selected topics (based on the instructor) relating to the field of Women's, Gender, and Sexuality Studies from interdisciplinary and feminist perspectives. Students research foundational and emerging secondary scholarship in the field and are expected to complete a major research project, as well as formally present their findings orally to the seminar. The junior seminar is intended to prepare students for their senior project by giving them an opportunity to practice their research skills in a particular subject and on a smaller scale. *Prerequisites: WGSS 100, WGSS 210 or WGSS 211, and WGSS 300; or permission of the instructor.*

WGSS 620 Senior Project

Research, presentation and defense of the Senior Project.