

## The College

The Bachelor of Arts curriculum at Alfred University emphasizes those areas of study which form the basis for any truly liberal education. We use the term “liberal” here in its original sense, that of freeing the mind to explore various fields of interest.

We believe that liberally educated citizens perform complex intellectual tasks, tasks which have technical, moral, and political consequences. Our effort is to give our students the constructive skills to accomplish those tasks. These skills include conceptual analysis, disciplined writing, and a creative approach to problem solving. We put specialized knowledge and inquiry into values within living contexts, encouraging our students to meet real demands in real situations. We prepare them not only for graduate and professional schools but for leadership in the world.

Our faculty members are dedicated to teaching and advising. They give the kind of personal attention that encourages students to find their directions and to succeed in their efforts. Faculty advisors are available not only to assist in choosing courses and majors, but also to help with personal and career decisions. In the classroom and within our advising structure, we pay close attention to students as individuals and assist them to achieve, often beyond their own expectations. Our requirements for the bachelor’s degree combine breadth of study in a range of subjects and disciplines, represented by the general education program, with specialization in a major field of study. The College offers 28 majors and over 40 minors. (see pp. 82-83) In addition, students may take courses and complete minors in other colleges within the University, as long as prerequisites for the minors are met.

### Graduation Requirements

Students who enroll in the College of Liberal Arts and Sciences (CLAS) must complete the requirements listed below to receive the BA degree:

- a total of 124 credit hours with a cumulative GPA of at least 2.00
- the general education program
- the First-Year Experience (FYE) Requirement or Transfer Student Seminar
- the requirements for a CLAS approved major
- the University Global Perspective requirement (see p. 54; p. 71)
- the University Physical Education requirement (see p. 54)

Students must be in residence at least during the senior year. The Dean may permit students who have earned all but eight or fewer of the credits required for graduation to complete their degree requirements elsewhere.

### Advising

The College of Liberal Arts and Sciences believes that high quality academic advising is essential to the well-being of both the College and its students. This emphasis helps fulfill the University’s pledge to help students define and develop realistic needs and goals and to successfully match those needs with available institutional resources.

The advising process is most successful when the advisor and the student have a close working relationship. In consultation with their faculty advisors, students work out a plan of study for each semester, such that an appropriate balance is achieved of general education courses, major requirements, and electives. Advising is considered a joint responsibility of faculty and students; it is not the advisor’s task to set goals, choose courses, make decisions for students, or ensure that students fulfill all requirements. The advisor’s task is to guide each advisee toward accepting responsibility for mature academic decision making.

### **Transfer Students**

The following criteria apply to the evaluation of transfer records:

- A three credit-hour course will satisfy a four-credit hour general education requirement (Only three credit hours, however, will be applied towards the 124 credit hours needed for graduation).
- Transfer students must earn at least 30 credit hours in residence at Alfred University.
- Transfer students from two-year colleges may receive a maximum of 60 credits (the number needed to achieve junior standing) from those two-year colleges. (see p. 15 for more information.)

## **General Education Requirements for All Students**

The general education program, required of all students in the College of Liberal Arts and Sciences, is designed to help students achieve greater intellectual breadth and proficiency and to create common points of reference for students from different disciplines. The program introduces students to the tools they will need for advanced study and exposes them to different ways of thinking about their world. This curriculum allows students to develop the kind of intellectual flexibility they will need for meeting future challenges.

The program has two main features: (1) it emphasizes the importance of each student demonstrating basic competencies early in the college program, either through proficiency examinations or through course work that teaches these competencies; this is an important part of the curriculum since it provides tools essential for successful work in advanced courses, as well as promoting skills that are valuable after graduation; (2) it requires each student to have exposure to six areas of knowledge; this is intended to provide a broad foundation both for more advanced study and for a lasting intellectual engagement with scholarly and cultural issues.

The general education program is divided into two parts: basic competencies and areas of knowledge. Students are expected to complete the basic competencies during the first two years of study. Students are encouraged, although not required, to complete the areas of knowledge during their first two years. These requirements may be satisfied either through course work or proficiency examinations (which carry no academic credit).

### **Basic Competencies**

#### **I Written Communication**

Each student must successfully complete the second semester of college writing. Students will be placed in the appropriate level course depending upon their scores on college entrance exams. Students scoring 499 or lower on the SAT Writing Exam (539 or lower on the SAT Verbal or 25 or lower on the ACT-English Exam) must take ENGL 101 and ENGL 102. Students scoring 500-699 on the SAT-Writing Exam (540-739 on the SAT Verbal or 26-29 on the ACT-English Exam) must take ENGL 102. Students scoring 700 or higher on the SAT-Writing Exam (740 or higher on the SAT Verbal, or 30 or higher on the ACT-English Exam) have satisfied this requirement.

## II Foreign Language

Each student must successfully complete the second semester of the first year of one foreign language at the college level or pass a placement or challenge exam that indicates competency at the second semester level. International students for whom English is a second language have met this requirement.

## III Quantitative Reasoning

Each student must complete the Quantitative Reasoning Competency. This can be done in either of two ways.

1. Score 630 or higher on the SAT-Mathematics Exam (28 or higher on the ACT-Math Exam)
2. Successfully complete one of the following courses:

BIOL 226	Biostatistics
ENVS 205	Environmental Data Analysis
MATH 101	Communicating with Numbers
MATH 102	Mathematics for Early Childhood/Childhood Teachers
MATH 107	Calculus Concepts for the Social Sciences
MATH 151	Calculus I
PHIL 282	Introduction to Logic
POLS/SOCI 230	Introduction to Data Analysis and Statistics
PSYC 220	Psychological Methods and Statistics
SCIE 115	Materials in Society (also applies to “F” lab course requirement)
SCIE 127	Doing Science (also applies to “F” lab course requirement)

## Areas of Knowledge

A - Literature (4 credits required)

B - Philosophy or Religious Studies (4 credits required)

C - The Arts (4 credits required)

D - Historical Studies (4 credits required)

E - Social Sciences (8 credits required – 4 credits each in two of the following three categories):

Psychology

Political Science or Economics

Sociology or Anthropology

F - Natural Sciences (8 credits required with one course including laboratory work)

For students who do not demonstrate proficiency through examinations, twenty (20) credit hours are required in Basic Competencies. The Areas of Knowledge distribution requirements comprise thirty-two (32) credit hours.

## Degree Requirements (Majors)

In addition to the general education program, all CLAS students must fulfill the requirements for a major to qualify for a bachelor's degree. A major provides students with an opportunity to delve deeply into the study of a particular subject, developing expertise and critical thinking through sustained and advanced work. At least half of a student's coursework toward the major must be completed at Alfred University. Transfer credits toward the major are approved by the chair or director of the particular program in which the major resides.

Students are expected to declare their major by the end of the sophomore year. We advise students to consider various options and become familiar with the requirements for a particular major before filing a major declaration. Students should also discuss their interests and objectives with their academic advisor before declaring a major. In most cases, students have done some previous coursework in the discipline before declaring the major. Faculty members are great resources for discussing possible majors.

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Each February, the College sponsors a Major and Minor Fair showcasing the various areas of study, which allows students the opportunity to talk with faculty members about the requirements for the majors.

All courses required for a major must be completed with grades of “C” or better. Students may also be required to pass a comprehensive examination in the major.

Some major programs, such as Athletic Training Education, require specific sequencing of courses and careful planning, with some prerequisite courses to be taken in the freshman year. Students preparing for secondary school teaching in an area related to their major should consult with an Education advisor as well as their major advisor to plan their course of study combining major requirements and education courses.

The following majors are offered by the College of Liberal Arts and Sciences:

Athletic Training	Environmental Studies	Interdisciplinary Art
Biology	French	Mathematics
Chemistry	Geology	Philosophy
Communication Studies	General Science	Physics
Comparative Cultures	German	Political Science
Criminal Justice Studies	Gerontology	Psychology
Economics	Global Studies	Sociology
Early Childhood/Childhood Education	History	Spanish
English	Interdepartmental Major	Theatre

### **Individually Structured Major**

The Individually Structured Major offers students the opportunity to structure and declare an independent, interdisciplinary major in cases where the student's plan of study cannot be accommodated by one of the existing majors within the College of Liberal Arts and Sciences. Each individually structured major requires a formal program proposal and subsequent program summary approved by the Curriculum and Teaching Committee and Dean of the College. Mature and self-directed students can prosper in this major.

Individually structured majors must be approved by the beginning of a student's junior year. Advising and additional information about proposing an individually structured major is available from the Dean's Office. These special majors are created and supported in consultation with a two or three-member Faculty Advisory Board, chosen by the student. The individual attention received while working with the Advisory Board adds significantly to the value of this unique educational experience.

Employers and graduate schools are impressed by the initiative and accomplishments of these self-directed students and their unique, “custom-designed” academic preparation. Among the wide variety of student-designed programs have been International Environmental Relations; Historic Preservation; Creative Writing and Graphic Design; Religion and Ethnicity; Art History and Performing Arts Management; Media Politics; Organizational Behavior; Art; Museum Studies and Entrepreneurship; Socially Responsible Entrepreneurship; The Business of Art; Biopsychology; Ecological Psychology; Sustainable Agriculture; Art; Language and Culture; Video/Music Communications; and Prosthetic Robotics.

## The Minors

Students may elect to declare a minor to supplement the major field. A minor allows students the opportunity to broaden their educational experience and enriches career possibilities. Students should refer to the list of minor programs offered and, in consultation with faculty advisors, determine if any are appropriate. Minors offered by other colleges and schools of the University are also available to Liberal Arts and Sciences students if prerequisites are met. Students are expected to complete at least half of their minor requirements at Alfred University. The division chair should be consulted about matters regarding transfer credits for the minor.

Minors consist of at least 14 and no more than 24 credit hours, including introductory courses and courses in related fields. As with the major, all courses used to complete a minor must have grades of “C” or better.

Anthropology	Equestrian Studies	Music
Art Education	Exercise Science	Philosophy
Astronomy	French	Physics
Biological Illustration	Geology	Political Science
Biology	German	Psychology
Chemistry	Gerontology	Public Law
Communication Studies	Global Studies	Religious Studies
Criminal Justice Studies	Health Studies	Social Science Research
Critical Discourse Studies	History	Sociology
Dance	Interdisciplinary Art	Spanish
Economics	Mathematics	Theatre
English: Literature	Middle/Adolescent	Violence Studies
English: Writing	Education	Women’s Studies
Environmental Studies		

## Internships

An internship is defined as a field or work experience undertaken by a student for academic credit in a setting related to that student’s career plans or academic interests. Some internships involve participating in a formal program such as that sponsored by the State legislature in Albany.

Other internships are established through personal or informal contacts between a supervising faculty member and an institution or agency willing to take on the responsibility for supervising an intern in the field setting.

An internship program may be part of a more comprehensive off-campus study program, such as Washington Semester. Internships may be paid or unpaid. Credit will not be given for work experience alone. Any internship experience must involve a formal attempt (e.g., in the form of a paper) to integrate the student’s field experience with his/her academic interests. Student interns are supervised by an academic supervisor who is an Alfred University faculty member and by an on-site supervisor. The academic supervisor has ultimate responsibility for overseeing the internship. Evaluation of a student’s performance is made by the academic supervisor in consultation with the on-site supervisor. To earn credit toward the degree, students must register for Internship credit during the semester in which they are undertaking the internship and complete the internship contract with the faculty supervisor.

## Cooperative Programs

### **Albany Semester - An Internship with the New York Assembly**

Interns work in the office of a New York State Assemblyman doing legislative research, responding to constituent inquiries, and studying New York State public policy issues. A \$1000 stipend helps defray the cost of living in Albany. AU grants 12 credit hours for this excellent first-hand experience in NY State government.

### **4+1 Master of Business Administration/Liberal Arts/College of Business Program**

The College of Business offers a 4+1 program for students majoring in Liberal Arts and Sciences. By completing the appropriate courses at the undergraduate level, a student may successfully complete the requirements for a Masters in Business Administration (MBA) at Alfred University in one year after receiving his or her undergraduate degree.

### **Alfred University/Columbia University Liberal Arts/Engineering Program**

This plan enables students to attend the College of Liberal Arts and Sciences for an initial period of three years and the Columbia University School of Engineering and Applied Science for the last two years. Upon program completion, students receive the BA degree from Alfred University and a BS in Engineering from Columbia. Students in this program have the advantage of receiving a broad liberal arts education and a technical education in five years, rather than the longer period that usually would be required if both degrees were obtained separately.

Note: This same combination of BA and BS degrees can also be accomplished in five years on the Alfred University campus between the College of Liberal Arts and Sciences and the Inamori School of Engineering.

### **Alfred/Duke University Environmental Management Forestry Program**

Alfred University participates in a cooperative program with the School of Forestry and Environmental Studies at Duke University through which students can earn a bachelor's degree at Alfred and a master's degree at Duke in a total of five years. Interested students are urged to consult with the program advisor by the beginning of the sophomore year for further details.

### **Alfred University/New York University College of Dentistry Articulation Agreement**

Alfred University participates in a cooperative program with the New York University College of Dentistry which enables students to complete fourth year requirements at Alfred while they are enrolled in the first year of NYUCD's Doctor of Dental Science program. Eligibility for admission to this program is contingent upon coursework completion and other criteria jointly established by the two institutions. Interested students should consult with the pre-health advisory program advisor soon after arriving in Alfred.

### **Washington Semester - A Cooperative Program with The American University**

Upper-class students particularly interested in public policy at the national level have an opportunity to spend one semester in Washington, D.C., in a cooperative program administered by American University. To qualify, a student must have an outstanding academic record and be recommended by the University. This program is coordinated in the Division of Social Sciences. Students in the New York State College of Ceramics are responsible for additional costs. In addition to the major focus on national government, semester programs are available in a variety of options, including economics, journalism, law enforcement, the arts, international business, and foreign policy.

Participating students have found that the experiences and contacts gained during their semester in Washington have aided them in obtaining rewarding and challenging positions later.

### Articulation Agreements

The College of Liberal Arts and Sciences has several articulation agreements with institutions which grant associate degrees. For further information contact the Registrar's Office.

## Pre-Professional Programs: Law and Health-related Professions

These pre-professional advising programs are for students who wish to prepare for the study of law or medicine, dentistry, veterinary medicine and other health-related professions. The program does not constitute a major. Participants major in an academic discipline of their choice. While most students choose to major in Chemistry or Biology for the pre-health program and in the humanities or the social sciences for the pre-law program, majors in academic areas as diverse as art, engineering, business and any of the liberal arts disciplines are possible.

Pre-health students should work with their primary academic advisor in consultation with a health-related professions advisor from the very beginning of the freshman year since it takes careful planning to see that both major and pre-professional requirements are completed on schedule. Students should give serious consideration to selecting a major as early as possible and be prepared to file a major program plan of study by the end of the sophomore year.

Pre-law students do not follow a prescribed curriculum but should work with their major advisor in consultation with a pre-law advisor during the sophomore year.

## Major and Minor Requirements

### Anthropology

#### Requirements for the Anthropology minor

ANTH 110	Cultural Anthropology	4
ANTH 120	Human Origins	4

*Plus eight additional credit hours of course work in Anthropology and related areas to be chosen in consultation with the Anthropology minor advisor.*

**Total credit hours** **16**

### Astronomy

Students may take a variety of courses to become acquainted with modern astronomical thought and observational technique. One may prepare for graduate study in astronomy or astrophysics by completing a Physics major and electing additional courses in Astronomy in the Astrophysics Concentration.

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The John L. Stull Observatory is an unusually well-equipped facility devoted exclusively to the instruction of undergraduate students. Its six domes house a 9 inch refractor, reflectors of 14, 16, 20, and 32 inch apertures (the 32 inch is computer-controlled), two solar telescopes and two commercial 8 inch telescopes. An adjoining classroom building houses a darkroom and auxiliary equipment including a set of CCD electronic cameras and a network of computers for displaying these images.

### Requirements for the minor

ASTR 107	Elementary Astronomy Laboratory	2
ASTR 302*	Planetary Science	2
ASTR 303*	Stellar Astronomy	3
ASTR 304*	Galactic Astronomy and Cosmology	4
ASTR 307	Observational Astronomy	2
<b>Total credit hours</b>		<b>13</b>

\*Note: These courses have prerequisites. See course descriptions.

## Athletic Training

The program offers a major in Athletic Training and a minor in Exercise Science. Students interested in applying for admission to AU's Athletic Training Education Program are required to obtain a minimum of 50 clinical hours observing in the athletic training room under direct supervision of a certified staff athletic trainer (see page 10 of this catalog: for policy for Freshman applicants to the University). The directed observation period is comprised of two semesters. The purpose of the directed observation period is to give the prospective student an opportunity to observe the role and function of a certified athletic trainer in the management of health care problems associated with intercollegiate athletic participation. Students are given an opportunity to observe athletic trainers working in these domains:

- Prevention
- Clinical Evaluation and Diagnosis
- Immediate Care
- Treatment, Rehabilitation and Reconditioning
- Organization and Administration
- Professional Responsibility

The emphasis in clinical directed observation is on the orientation and development of knowledge of the respective roles of Athletic Training personnel, and limited performance and/or direct application of technical skills and knowledge.

It is expected that directed observation students will attend all scheduled in-services and athletic training student meetings, as well as successfully complete the required competencies and proficiencies for first semester athletic training students. Students are also expected to enroll in the Athletic Training Basic Education Program (ATBEP), complete a Technical Standards for Admission form and complete the basic program during their freshman year.

After completing the mandatory directed observation period, the prospective athletic training student may apply for acceptance into the Athletic Training Education Program (ATEP). Application to the ATEP level consists of submission of a résumé, intent to enroll, three letters of recommendation, transcripts, and evidence of successful completion of all requirements of the ATBEP. Interviews with the program faculty are also required. In order to be considered for acceptance into the ATEP the student must:

- have a cumulative grade-point average of 2.50 with a grade-point average of 2.75 or better in the courses included within the ATBEP
  - provide proof of current American Red Cross First Aid, CPR and AED certifications or certification as an Emergency Medical Technician.
  - provide proof of Hepatitis-B vaccination or declination statement
  - complete an Athletic Training Education Program Technical Standards for Admission form
  - complete an Athletic Training Education Program Application
  - submit three (3) letters of recommendation
  - undergo a formal interview with AU ATEP faculty
  - completion of 50 verified hours of supervised clinical experience and observation at Alfred University or approved affiliate
  - active member of the Alfred University Athletic Training Club
- Note: student membership in the National Athletic Trainers' Association is encouraged**

### **Appeals Process for Athletic Training Students**

Alfred University and the Division of Athletic Training are committed to the highest principles of academic and personal integrity concerning the application and admissions process of the Athletic Training Education Program. An athletic training student who has met all of the requirements necessary in order for admission into the ATEP may be given provisional admission or denied admission altogether based upon any of the following grounds:

- a cumulative grade-point average lower than 2.50
- a cumulative ATBEP grade-point average lower than 2.75 or a grade below a C in any of the ATBEP courses
- incomplete application (missing one or any of the following: letter of application, résumé, letters of recommendation, transcripts)
- failure to complete basic athletic training competencies
- lack of a minimum of 50 hours of accepted verified clinical experience
- failure to provide adequate proof of first aid/CPR/AED certification
- failure to provide proof of Hepatitis-B vaccination or declination statement

### **Provisional Admission**

Special circumstances may arise where a student may be admitted provisionally to the Alfred University Athletic Training Education Program. In this instance, students will be given very clear objective criteria, which must be satisfied. This category of admission is only utilized when students are extremely close to meeting a specific admission criterion. Athletic training students admitted on a provisional status will be notified in writing. She/he will be given a specific goal/criteria, which must be met during the succeeding semester in order to maintain their position in the Athletic Training Education Program. During this time, the student must demonstrate continued progress toward the goal and eventual achievement. If the criterion is not met within the allotted time, the athletic training student will be downgraded to non-admission status. This student must then re-apply to the program for re-admission.

### **Appeals Process**

Students not accepted into the ATEP have the right to appeal to the Division of Athletic Training Program Director. It is anticipated that admission to the program by this route will be rare except in extenuating circumstances. A letter of appeal must be submitted no later than one (1) month following denial. It must detail the grounds for appeal. The letter will be reviewed by the Athletic Training Appeals Committee (comprised of the Program Director, full-time Division of Athletic Training faculty/staff and the Dean of the College of Liberal Arts and Sciences) and ruled upon.

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A letter regarding the decision of the appeals committee will then be mailed to the student no later than two (2) months following the original denial/non-admission letter. The decision of the Appeals Committee is *final*.

**Note: The Division of Athletic Training faculty/staff reserves the right to determine the propriety of grounds for appeal based on the facts presented on a case-to-case basis.**

### Second-Chance Provision

A student not accepted into the Alfred University ATEP may reapply. This opportunity is intended for those who failed to gain admission on their first attempt. The student must formally submit a request to exercise the second chance provision. This request must be submitted no more than one (1) month after receipt of the denial notification. If not submitted in due time, the student waives the right to second chance provision and must reapply by means of the Admission policy. The second chance provision consists of one additional semester for the student to demonstrate that he or she is capable of meeting the entrance requirements. The exact requirements to be met will be outlined in the letter of denial. Students will then submit a letter detailing how the deficiencies have been successfully addressed since denial of admission, have a follow-up interview with the Division of Athletic Training faculty/staff and submit two additional support letters of recommendation.

### Program Summary for BS in Athletic Training

Complete the Basic Education Program and the Athletic Training Education Program (below), the College of Liberal Arts and Sciences General Education Program, the University Physical Education and Global Perspective Requirements, and enough electives to reach at least 124 credit hours.

#### Basic Education Program Course Requirements (ATBEP):

ATHT 103	Prevention and Care of Athletic Injuries	4
ATHT 104	Introduction to Clinical Experience	1
ATHT 110	Medical Sciences	2
ATHT 210	Advanced Athletic Training	3
PHED 311	First Aid and CPR (B-block)	2
<b>Total credit hours</b>		<b>12</b>

#### Athletic Training Education Program:

ATHT 201	Clinical Experience in Athletic Training I	1
ATHT 202	Clinical Experience in Athletic Training II	1
ATHT 222	Nutrition for Human Performance and Exercise	
or BIOL 230	Nutrition in Health and Disease	2
ATHT 301	Clinical Experience in Athletic Training III	1
ATHT 302	Clinical Experience in Athletic Training IV	1
ATHT 334	Physical Evaluation of the Lower Extremity	4
ATHT 348	Physical Evaluation of the Upper Extremity	4
ATHT 356	Theory and Techniques of Therapeutic Modalities	
or ATHT 365	Therapeutic Applications I	4
ATHT 367	Theory and Techniques of Therapeutic Exercise	
or ATHT 376	Therapeutic Applications II	4
ATHT 392	Biomechanics	3
ATHT 393	Physiology of Exercise	3
ATHT 401	Clinical Experience in Athletic Training V	1
ATHT 403	Medical Aspect of Athletic Training	1
ATHT 420	Pharmacology	2
ATHT 432	Administrative Aspects of Athletic Training	3
ATHT 459	Research Design in Athletic Training	3
ATHT 485	Clinical Internship in Athletic Training	4

ATHT 495	Current Topics in Athletic Training	2
BIOL 107	Human Anatomy & Physiology/Lab I	4
BIOL 108	Human Anatomy & Physiology/Lab II	4
BIOL 201	Biology I/Lab	4
PHED 218	Weight Training	2
PHED 101	Cross Training	
or PHED 103	Cardiovascular Fitness	2
PSYC 322	Health Psychology	2-4
<b>Total credit hours</b>		<b>64</b>

### Student Transfer Policy

Freshman or sophomore athletic training students applying for transfer to Alfred University from another institution having prior athletic training clinical experience must also complete the aforementioned criteria for acceptance (ATBEP prerequisites including 100 supervised clinical experience hours). If a student transfers with prior athletic training clinical experience, she/he may petition to have the 100 hour directed observation requirement prorated, accordingly. The candidate must submit a letter of recommendation documenting his/her clinical experience hours from his/her former supervising certified athletic trainer. Once completing the prerequisite courses, the student may apply (following the application process outlined) for admission into the Athletic Training Education Program (ATEP). These prerequisite courses must be taken at Alfred University; therefore, credit for these courses may not transfer from another institution.

Athletic training students who have completed their second year of athletic training courses or beyond at another institution and are applying for admission to Alfred University will not be considered for transfer into the ATEP. The Alfred University Athletic Training Education Program currently does not allow juniors or seniors to transfer into the ATEP.

### Academic Requirements

Once a student is formally accepted into the ATEP, he/she must adhere to the following guidelines and policies:

- Students must maintain admission requirements in order to remain in the program. Failure to maintain the published requirements will result in the student being placed on academic probation.
- If placed on academic probation, the student will have one semester to correct deficiencies. If she/he fails to correct deficiencies, the student will be suspended from the program.
- During probation from the ATEP, the student will not be permitted to pursue additional athletic training classes or accumulate additional clinical hours unless given written permission from the Division of Athletic Training Program Director.

### Athletic Training Hours Requirements

Upon successful completion of the ATBEP, the athletic training student must complete an additional 900 verified clinical experience hours while occupying a place in the ATEP. The Division of Athletic Training faculty/staff assigns clinical hours according to individual class schedules. Attendance is mandatory for all assigned clinical experiences. Athletic training students are required to obtain a minimum of 50 to 200 hours depending on the level of the clinical experience course enrolled each semester.

**Approved Clinical Instructor Assignments**

While enrolled in Clinical Experiences I-V the athletic training student will be assigned to an ACI; each ACI is responsible for a specific athletic team. The athletic training student is responsible for attending all scheduled practices and home competitions. Each student will be given the opportunity to obtain hours within the parameters of upper extremity, lower extremity, general medical and equipment intensive environments.

**Absences from Assigned Duties**

An *Absence from Clinical Assignment* form must be completed by any athletic training student a minimum of three (3) days before a missed practice or competition. The form will be reviewed by the appropriate ACI and returned within 24 hours with a verdict. If the absence is excused, the athletic training student is responsible for finding a qualified athletic training student replacement and notifying the appropriate ACI. If an absence is unexcused, the athletic training student will be subject to the disciplinary policy outlined in the Athletic Training Student Handbook.

**Athletic Training Student Evaluations**

Athletic training students will be evaluated twofold each semester (mid-term and end-of-semester) by their respective ACI. Self-evaluations will also be completed at this time. The ACI will also complete individual evaluations in each of the six Clinical Experience courses.

Athletic training students enrolled in ATHT 485 - Clinical Internship in Athletic Training, will be evaluated by the Clinical Instructor Supervisor at each site where clinical experience hours are obtained. Likewise, athletic training students will be given the opportunity to evaluate both their ACI and Clinical Instructor Supervisor. The evaluation process is utilized to assess the progress of each student’s didactic knowledge and application of both educational competencies and clinical proficiencies. The Clinical Education Coordinator of the Athletic Training Education Program reviews all evaluations with each student.

**Professional Organization Membership**

Athletic training students are encouraged to enroll in the National Athletic Trainers’ Association (NATA) and the New York State Athletic Trainers’ Association (NYSATA) by the end of the sophomore year. Only students who have been members for at least one year are eligible to be considered for scholarships offered by these organizations. All ATEP students are encouraged to join the NATA and NYSATA. Membership applications are available from the Athletic Training Education Program Director.

**Requirements for the Exercise Science minor**

The minor provides students with the ability to address the growing concerns of society about injury prevention, wellness, fitness, and rehabilitation. Additionally, it is designed to prepare students to become certified Strength and Conditioning Specialists recognized by the National Strength and Conditioning Association.

**Required Courses:**

ATHT 103	Prevention and Care of Athletic Injuries	4
ATHT 205	Structural Kinesiology	2
ATHT 393	Physiology of Exercise	3
BIOL 107	Human Anatomy and Physiology I	4
BIOL 108	Human Anatomy and Physiology II	4
BIOL 230	Nutrition in Health and Disease	2

PHED 190	Principles of Strength and Reconditioning	2
PHED 311	First Aid and CPR	2
<b>Total Credit Hours</b>		<b>23</b>

## Biology

The study of life is in an exceptionally exciting phase. Discoveries in the life sciences are occurring faster than their implications can be absorbed by society. It is the mission of the Division of Biology to provide a solid, diverse education in the liberal arts and a strong biological foundation for a variety of career interests. Different pathways in the major provide a biological foundation for a variety of career interests including post-graduate study in medicine, dentistry, veterinary medicine or other health-related professions, post-graduate study in numerous biological disciplines from biotechnology to ecology as well as for a number of employment opportunities, including teaching and biological research. The curriculum facilitates double and co-majors with other disciplines and contributes to the overall natural science education serving as background for many career choices. For instance, students in the molecular life sciences will find special opportunities in the Biomedical Materials Engineering Science program in the Inamori School of Engineering, and those with concerns in global and human ecology may participate in the interdisciplinary Environmental Studies Program. Students in other disciplines can complete a minor in Biology or in Biological Illustration.

Course objectives are met through lectures, laboratory and fieldwork, discussions, and seminars. Students are strongly encouraged to become involved in undergraduate research projects and to seek summer and semester internship and study abroad experiences.

### Requirements for the major

Each student completes a core of courses and selects a prescribed number of courses from the distribution categories related to his/her personal and career interests.

Additional courses in chemistry, mathematics, and physics are required or recommended. All courses taken as part of the Biology major must be passed with a grade of C or better.

### Summary of Requirements for the Biology Major:

Biology Core	17
Major Electives	24
Required Chemistry Courses	11-16
<b>Total Credit Hours</b>	<b>52-57</b>

### Core: Take these six courses

BIOL 201	Biology I	4
BIOL 202	Biology II	4
BIOL 226	Biostatistics	3
BIOL 365	Genetics	4
BIOL 390	Junior Seminar	1
BIOL 490	Biology Research Seminar	1

Choose at least 24 additional credit hours of major electives with at least one course from each of the three distribution categories:

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**Cell/Molecular:** BIOL 362 (Molecular Cell Biology); BIOL 302 (General Microbiology); BIOL 340 (Virology); BIOL 372 (Advanced Cell Biology); BIOL 374 (The Biology of Cancer); BIOL 402 (Immunology); BIOL 404 (Mechanisms of Microbial Pathogenesis); BIOL 420 (Biochemistry: Proteins and Metabolism); BIOL 422 (Biochemistry: Nucleic Acids)

**Organismal:** BIOL 311 (Invertebrate Zoology); BIOL 322 (Botany); BIOL 332 (Histology); BIOL 346 (Animal Nutrition); BIOL 352 (Developmental Biology); BIOL 375 (Comparative Vertebrate Biology); BIO 376 (Animal Physiology); BIOL 410 (Endocrinology)

**Organisms in their Environment:** BIOL 106 (Field Botany); BIOL 304 (Microbial Ecology); BIOL 345 (Vertebrate Natural History); BIOL 348 (Animal Behavior); BIOL 354 (Ecology); BIOL 356 (Aquatic Ecology); BIOL 358 (Biogeography and Landscape Ecology); BIOL 415 (Genetics and Evolution of Populations); BIOL 425 (Physiological Plant Ecology)

*Required* related course work includes CHEM 105/106 (General Chemistry) and CHEM 310 or 315/316 (Organic Chemistry). *Recommended* related course work includes Introductory Physics (8 credits) and Math (8 credits). Selection of these courses depends on the student's postgraduate plans and is done in consultation with the faculty advisor.

### Preparation for Middle/Adolescent Education

Future science teachers take Core courses (23 credits), distribution electives (20), and required related course work (11-16 credits in chemistry). Students should consult faculty advisors in Biology and Education to select appropriate courses in biology and related disciplines.

### Requirements for the Biology minor

A total of 24 credits is required for the minor in Biology: BIOL 201/202 (8 credits), Biology courses selected in consultation with advisor (12), and CHEM 105 (4).

### Requirements for the Biological Illustration minor

A total of 24 credits is required for the minor in Biological Illustration: BIOL 201 and 202 (8 credits), one elective course in biology (BIOL 107, BIOL 322, BIOL 332 or BIOL 375), one drawing course (ART 111, ART 282, 283, or 284), and two studio art courses (ART or IART).

## Chemistry

Chemistry as pure science attempts to describe and understand the transformations of matter and the physical properties of all substances. As an applied science it provides society with the materials needed for a technological age and the knowledge to assess the costs and benefits of that technology. Because it is a fundamental science concerned with the properties of all substances, its impact is far reaching. A knowledge of chemistry is essential not only to the student of disciplines such as biology, environmental studies, engineering, ceramics, medicine, and forensics, to name a few, but also to the person who wishes to be liberally educated. With many scientifically-based issues facing today's society, some knowledge of chemistry is essential.

The division offers a core major and an American Chemical Society (ACS) approved degree. The core major provides a firm background for entry into the job market as a chemist, for advanced study in the discipline, for advanced study in a related discipline or a foundation for various professional schools such as medicine, dentistry, veterinary medicine, law or library science. It is appropriate for most students wishing to have a double major as well as for students wanting to earn a middle childhood/adolescence education minor. The ACS approved degree requires the core major plus six additional semester credit hours. Students completing the additional credits will be certified to ACS upon graduation and are immediately eligible to join ACS. Students who definitely intend to pursue graduate studies in chemistry or who desire a nationally certified degree should consider the additional course work.

A minor in chemistry is offered. The minor not only provides some breadth (14-15 credits), but also permits the student to tailor his/her studies to complement a major in other fields (5-6 additional credits). For example, a biology major might emphasize organic chemistry whereas a person in ceramic science might focus on physical, inorganic or analytical chemistry.

#### Requirements for the major

CHEM 105/106	General Chemistry	8
CHEM 315/316	Organic Chemistry	8
CHEM 321	Introduction to Analytical Chemistry	4
CHEM 343/346*	Physical Chemistry I and II	6
CHEM 345	Physical Chemistry Laboratory	1
CHEM 372	Inorganic Chemistry	3
CHEM 374	Inorganic Chemistry Laboratory	1
CHEM 390	Junior Seminar	1
CHEM 423	Instrumental Analysis	3
CHEM 461	Advanced Chemistry Laboratory	2
CHEM 490	Senior Seminar	1
<b>Total credit hours</b>		<b>38</b>

\*Ceramic Engineering and Materials Science majors who also major in Chemistry may take CEMS 214, 235 and 344 for equivalent content.

#### Requirements for the ACS approved major

Above, plus six additional credits. These six credits must include BIOL 420 (Biochemistry: Proteins and Metabolism) and at least two credit hours from CHEM 400, CHEM 414, CHEM 450, CHEM 457, CHEM 462, CHEM 485, CHEM 495, CEMS 334, CEMS 342, CEMS 344, CEMS 349, and CEMS 434. These two credits must also include at least 24 clock hours of laboratory time.

#### Related Study Required for the Major

MATH 151/152	Calculus I and II	8
PHYS 111 or 125	Physics I	4
PHYS 112 or 126	Physics II	4

For those students who wish to earn the ACS certified degree, BIOL 202 (4 credits) is also required as a prerequisite for BIOL 420.

#### Requirements for the minor

CHEM 105/106	General Chemistry	8
CHEM 310	Basic Organic Chemistry	
or CHEM 315	Organic Chemistry I	3-4

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Plus 8-9 additional credits from the following:

CHEM 316, CHEM 321, CHEM 343, CHEM 345, CHEM 346\*, CHEM 370,  
CHEM 372, CHEM 374, and BIOL 420 8-9

**Total credit hours 20**

\*Ceramic Engineering and Materials Science majors who minor in Chemistry may take CEMS 214, 235 and 344 for equivalent content.

## Communication Studies

The Communication Studies major enables students to develop a critical, historical, and practical understanding of human communication as it occurs in a variety of contexts. The core courses examine elements of the process of communication in a program which is grounded in the humanistic tradition and contemporary social science. The elective courses enable students to focus on specific contexts such as media studies or organizational communication.

This plan of study is designed not only for students planning to pursue careers as leaders in fields such as broadcasting, journalism, advertising, and public relations, but also for those who wish to acquire an awareness of general communications principles applicable to many careers. Moreover, since many Communication Studies courses investigate the impact of communication upon society, the major also provides a solid foundation for graduate study in Communications and related disciplines including Law, Business, and the Social Sciences.

As a supplement to their classroom work, students are encouraged to work with the University's FM stereo radio station, WALF, the student newspaper, *Fiat Lux*, and the campus television station, AUTV, as well as to complete an off-campus internship with a communications industry organization.

### Requirements for the major

All students must complete a 24 credit hour core consisting of the following courses:

COMM 101	Introduction to Communication Studies	4
COMM 110	Mass Media and American Life	4
COMM 205	Introductory Newswriting and Reporting	4
COMM 301	Broadcasters, Advertisers, and Audiences	4
COMM 309	Persuasion: Reception and Responsibility	4
COMM 410	Communication Ethics	4
<b>Total credit hours</b>		<b>24</b>

### Additional Requirements

20 credit hours from among any of the following courses (at least 12 hours must be at the 300-400 level; other courses are available subject to the approval of an advisor):

#### Media Studies Area

COMM 306	Gender in Communication	4
COMM 311	Advanced Public Speaking	4
COMM 401	Technology and Communication	4
COMM 404	Media Criticism	4
COMM 405	Television Criticism	4
COMM 475	Specialized Reporting	4
ENGL 210	Special Topics in Film	2 or 4
ENGL 233	Film Criticism	4

ENGL 234	Crime in Film	4
ENGL 235	Comedy in Film	4
ENGL 275	Fiction into Film	4
HIST 376	Modern American Culture	4
POLS 220	Perspectives on Political Science	2
POLS 236	Media and Politics	2
POLS 356	Movements	4

### Organizational Communication Area

COMM 409	Organizational Communication	4
ECON 201	Introduction to Economics and Markets	4
MGMT 328	Management and Organizational Behavior	3
MKTG 221	Marketing Principles and Management	3
MKTG 452	Marketing Research	3
MKTG 460	Seminar in Marketing	3
MKTG 479	Consumer Behavior	3
MKTG 486	Promotion Strategy	3
MKTG 489	International Marketing	3
PSYC 101	Introduction to Psychology <i>(prerequisite for all PSYC courses)</i>	4
PSYC 210	Communication and Counseling Skills	2
PSYC 220	Psychological Methods and Statistics	4
PSYC 282	Social Psychology	4
PSYC 289	Environmental Psychology	4
PSYC 311	Sensation and Perception	4
PSYC 332	Cognitive Processes	4
PSYC 372	Psychology of Women	4
PSYC 362	Industrial/Organizational Psychology	4

### General Communication Courses

COMM 200/300/400	Special Topics	2-4
COMM 385/485	Internship	1-4
COMM 470	Communication Practicum in Journalism	1-4

### Requirements for the minor in Communication Studies

COMM 101	Introduction to Communication Studies	4
COMM 110	Mass Media and American Life	4
COMM 205	Introductory Newswriting and Reporting	4
COMM 301	Broadcasters, Advertisers, and Audiences	4
COMM 309	Persuasion: Reception and Responsibility	4
COMM 410	Communication Ethics	4
<b>Total credit hours</b>		<b>24</b>

## Comparative Cultures

The Comparative Culture major makes it possible for students to gain an appreciation of cultural pluralism by studying various cultures and elements of culture while acquiring the tools of analysis and interpretation. Students achieve an understanding of the general nature of human culture and religion as well as more specific knowledge of particular societies and/or religious traditions.

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The major emphasizes the analytical methodologies of the complementary disciplines of Anthropology and History of Religions, fostering the cross-cultural and/or comparative study of such aspects of culture as myth, social organization, adaptive strategies, gender relations, kinship and descent, religious ritual, oral poetry, and visual and performing arts.

The curriculum includes core components (which should be completed early), elective courses and advanced study of a foreign language. It culminates in a major fieldwork project. Students are strongly encouraged to study for one or two semesters in a foreign culture.

### I. Core (10-12 credit hours)

ANTH 110	Cultural Anthropology	4
ANTH 304	Language and Culture	2-4
RLGS 105	Introduction to World Religions	4

### II. Elective Courses (22 credit hours)

Courses from Anthropology, History of Religions and Art History of non-Eurocentric traditions. 16 credits must be above 300 level. Up to 8 credits from other disciplines may be substituted (with advisor's approval).

### III. Fieldwork Project (8 credit hours)

Includes a 2 credit tutorial on methodological and/or hermeneutical issues related to the project. Two professors, with at least one a member of the major faculty, take part in the tutorial.

### Total Core Requirements

40

### IV. Language Study (up to 14 credit hours)

((Minimum requirement is proficiency equal to university study through the second year. Language majors and minors are encouraged.

### Total credit hours

(up to 56)

**Note: RLGS 105, ANTH 110 and two semesters of foreign language (16 credits in all) also fulfill current CLAS General Education requirements.**

### Elective Courses in Core Disciplines

ANTH 302	The Nacirema
ANTH 303	Health and Culture
ANTH 309	Magic and Religion
ANTH 312	Anthropology of Violence
ARTH 301	African Art I
ARTH 302	African Art II
ARTH 411	Pre-Columbian Art
RLGS 240	Religion in America
RLGS 252	Judaism and Islam
RLGS 254	Birth of the Christian Tradition
RLGS 257	Greek and Roman Myths
RLGS 307	Myth, Ritual, and the Creative Process
RLGS 308	Artists, Shamans and Cosmology
RLGS 359	History of Chinese Thought
RLGS 369	Buddhism
RLGS 374	Myth, Yoga, and Philosophy of India

## Criminal Justice Studies

As Criminal Justice Studies majors, students examine types of criminal behavior in terms of environmental influences which foster such behavior, social and governmental efforts at control, and practices developed to effect rehabilitation. In general, students learn the application of social science findings to the problems of criminal behavior. The major also provides for practical experience through academic fieldwork courses that encourage students to apply classroom knowledge to actual situations. Faculty are drawn from the social sciences.

### Requirements for the major

CRIM 351	Seminar in Criminal Behavior	4
CRIM 340	Concepts of Penology	4
POLS 232	Judicial Processes	2
POLS 417	American Civil Liberties	2
PSYC 342	Abnormal Psychology	4
SOCI 344	Deviance and Society (Prerequisite: SOCI 110)	4
SOCI 345	Crime and Delinquency (Prerequisite: SOCI 110)	4
<b>Total credit hours</b>		<b>24</b>

### Electives

The student must select 20 credit hours from the following:

ANTH 312	Anthropology of Violence	4
CRIM 322	Juvenile Justice	2
CRIM 332	Focusing on Police	2
CRIM 400	Special Topics in Criminal Justice	2-4
CRIM 450	Independent Study	1-4
CRIM 470	Field Work in Criminal Justice	4
PHIL 281	Ethics	4
POLS/SOCI 230	Introduction to Data Analysis and Statistics	3
POLS 313	State and Local Politics	4
POLS 316	American Constitutional Law	4
PSYC 282	Social Psychology	4
PSYC 371	The Psychology of Death and Dying	4
SOCI 235	Socialization	4
SOCI 343	Race and Ethnicity	4
SOCI 431	Research Design and Strategies	4

Students may find that knowledge of Spanish is useful in the criminal justice field.

### Institutes

In addition to completing the foregoing courses, the Criminal Justice Studies major is required to attend at least two institutes. These are normally offered once a year for a day to a day and a half. They deal with specific issues facing professionals in the criminal justice area.

### Requirements for the minor

CRIM 340	Concepts in Penology	4
POLS 110	Introduction to American Politics	4
POLS 232	Judicial Process	2
SOCI 110	Introduction to Sociology	4
SOCI 344	Deviance and Society	4
SOCI 345	Crime and Delinquency	4
<b>Total credit hours</b>		<b>22</b>

## Critical Discourse Studies

This minor introduces students to contemporary theory and to the debates which are centered on such theory. Issues discussed include the foundations of modernist and post-modernist critical studies, the role of human reason and theories of knowledge (epistemology), the study of methodologies and critical interpretation (hermeneutics), and language and its relationship to thought. Courses are broadly interdisciplinary, with special emphasis on such key thinkers as Nietzsche, Habermas, Mouffe, Kristeva, Derrida, Lyotard, Foucault, Burke, Heidegger, and other contemporary theorists.

### Required Core Courses (2 credit hours)

CRIT 201	Introduction to Critical Discourse Studies	2
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### Critical Perspectives (minimum of 12 credit hours)

CRIT 303	Women, Knowledge, and Reality	4
CRIT 321	Nietzsche	4
CRIT 341	Modern Political Theory	4
CRIT 359	Literary Criticism and Theory	2 or 4
CRIT 383	Philosophy of the Arts II	4

### Electives (Select 6 credit hours)

CRIT 281	Literature in Science	4
CRIT 300	Special Topics in Critical Discourse Studies	2-4
CRIT 304	Language and Culture	2-4
CRIT 309	Persuasion: Reception and Responsibility	4
CRIT 332	Twentieth-Century American Visions	4
CRIT 404	Media Criticism	4
CRIT 405	Television Criticism	3
CRIT 410	Communication Ethics	4
CRIT 420	Social Theory	4
CRIT 450	Independent Study	1-4

<b>Total credit hours</b>		<b>20</b>
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## Dance

The Dance Program is for students who have chosen other academic majors but want to keep dance active in their lives. The program is open to all students regardless of experience who want to explore the many diverse aspects of this form of expression in a non-threatening and creative environment.

Technique classes are offered in many areas such as ballet, modern, jazz, improvisation, and ethnic, as are courses in choreography. Instruction, beyond official course offerings, includes guest artist master classes and numerous, annual dance company residencies.

Performance opportunities abound. These include a recital style Dance "Showing" in the Fall and a full Concert in the Spring. Both are faculty guided and provide numerous opportunities for student performance and choreography. The AU Dancers Union is a highly active and energetic student organization that works in partnership with the faculty.

Other performance opportunities include senior dance projects and participation in residency concerts. Dependent on funding availability, students also have the opportunity to attend and participate in the annual American College Dance Festival.

**Requirements for the Dance minor:****Core Courses**

DANC 120	Fundamentals of Dance	2
DANC 222	Modern I	2
DANC 230	Improvisation/Composition I	3
DANC 270	Alfred University Dance Theatre (taken twice)	4
DANC 330	Improvisation/Composition II	3
DANC 311	Dance History	4

**Electives in Dance (select 6 credit hours)**

DANC 200	Special Topics	1-4
DANC 221/321	Ballet I and II	2
DANC 223/323	Jazz Dance I and II	2
DANC 224	Contact Improvisation	2
DANC 322	Modern Dance II	2
DANC 340	New and Existing Repertory	3
DANC 450	Independent Study	1-4

**Total credit hours** **24**

**Note: If DANC 120 is waived because of an equivalent background in dance, the minor requires 22 credit hours.**

**Economics**

The primary objective of the economics program is to study economic problems, theories, and policies within the context of the liberal arts educational tradition. Two major options are offered to meet students' differing needs: the General Option stresses the breadth and depth of economic thought, while the Business Option focuses on professional applications of economics. The Business Option also provides most prerequisite requirements for graduate MBA programs. Economics majors are encouraged to take advantage of the various minors in business administration subjects open to Liberal Arts and Sciences students.

Study in economics leads to careers in both the private and public sectors. Graduates work in management, banking, and law, in government, and as teachers. The economics major provides an excellent foundation for graduate study in law, public policy, foreign affairs, and business.

A Washington Semester in economic policy is available to economics majors through The American University in Washington, D.C. The semester includes intensive study of economic policy issues as well as seminars with government economists and other officials.

**Requirements for the major****Core – all options**

ECON 201	Introduction to Economics and Markets	4
ECON 202	Principles of Macroeconomics	3
ECON 331	Money and Banking	3
ECON 445	Managerial Economics	3
ECON 460	Seminar in Economics	3
<b>Total core credits</b>		<b>16</b>

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### General Option

Three elective upper division economics courses (ECON 300 and above) (An applied course in data analysis or quantitative methods, e.g., BUSI 261, POLS/SOCI 475, or PSYC 411, chosen in consultation with the advisor, may substitute for one economics elective)	9
Two additional courses in economics, political science or sociology, or ACCT 211, MKTG 221, or FIN 348 chosen in consultation with advisor	6-8
<b>Total credit hours</b>	<b>31-33</b>

### Business Option

Three elective upper division economics courses (ECON 300 and above)	9
<i>Note: An applied course in data analysis or quantitative methods, e.g. BUSI 261, POLS/SOCI 475, or PSYC 411, chosen in consultation with the advisor may substitute for one economics elective.</i>	
ACCT 211            Financial Accounting	3
FIN 348            Managerial Finance	3
MKTG 221        Marketing Principles and Management	3
<b>Total credit hours</b>	<b>34</b>

### Supporting Courses (all options)

BUSI 113, POLS/SOCI 230, <i>or</i> PSYC 220    (Introductory Statistics)	3 or 4
MATH 107 <i>or</i> 151            (Calculus)	4

The following requirements must be satisfied in order to earn a minor in Economics:

ECON 201    Introduction to Economics and Markets	4
ECON 202    Principles of Macroeconomics	3
ECON 460    Seminar in Economics	3
Two additional upper division economics courses (ECON 300 and above)	6
<b>Total credit hours</b>	<b>16</b>

## Education

Housed in the Division of Education are a major in Early Childhood/Childhood Education and a minor in Adolescence Education, Middle Childhood Specialist - Special Subjects. (Refer to the Graduate School Catalog for information on graduate programs offered by the Division of Education.)

### Education Major: Early Childhood/Childhood Education

Students completing the program meet the academic requirements of the New York State Education Department for certification in Early Childhood (PK-2 gr.) and Childhood Education (1-6 gr.).

Students who major in Early Childhood/Childhood Education receive an integrated blend of professional education methods coursework and field based opportunities in area schools that enable them to apply theory to classroom situations. These field-based experiences expose students to a diverse number of educational environments.

Students majoring in Early Childhood/Childhood Education must complete coursework in the arts and sciences that is rich in breadth and depth and fulfill requirements in basic competencies and areas of knowledge in the following subjects: written communication, mathematics, computer, literature, foreign language, arts, social science, historical studies and natural science.

**Academic Area of Concentration (or Second Major)**

Students majoring in Early Childhood/Childhood Education must complete 30 hours in an academic area of concentration or fulfill the requirements of a second major. In either case, students select an academic area that is aligned with the current New York State Learning Standards. Possible academic areas include English, Mathematics, Psychology, Science, and Social Studies (History). Half the coursework in the academic area of concentration must be taken at the advanced (300-400) level.

**Prerequisite Courses**

EDUC 230	Psychological Foundations of Education
EDUC 231	Social Foundations of Education
MATH 102	Mathematics for Early Childhood/Childhood Teachers
SCIE 127	Doing Science

One additional science course addressing the NYS content learning standards in Science.

**Admission to Program**

At the end of their sophomore year, students are reviewed for admission into the Early Childhood/Childhood Education program. To be admitted, students must have declared Education as their major and met with their Education advisor to ensure that all prerequisites have been met, they have an overall 2.75 GPA in their liberal arts coursework, and have achieved a 3.0 GPA in the prerequisite education courses (EDUC 230 and EDUC 231).

It is recommended that, each candidate for the program successfully pass the Liberal Arts & Science (LAST) of the New York State Teacher Certification Examinations prior to admittance into the program.

The Education portion of the program starts in the spring semester of the students' junior year, and includes field-based coursework in early childhood/childhood curriculum, orientation, methods of teaching literacy, and integrated methodology of social studies, math, science and technology. The required concurrent field experience in two extended placements take place in area schools and are designed as an opportunity to blend theory with experiential application. The following fall semester students are placed in area schools for two student teaching experiences. Students will need transportation to area school districts for both field placement (spring semester) and student teaching (fall semester) placements.

Concurrent coursework in advanced literacy methodology, and classroom assessment and evaluation strategies during this semester are designed to assist students with instructional planning and to incorporate and to align instruction, curriculum, and assessment with the New York State Learning Standards.

**Core Courses***Spring Semester - Junior Year*

EDUC 374	Integrated Methods: Soc Studies/Science/Math/Computer	6
EDUC 375	Early Childhood/Childhood Practicum	3
EDUC 471	Methods of Teaching Literacy	6
EDUC 474	Orientation to the Early Childhood/Childhood Classroom	3

*Fall Semester - Senior Year*

EDUC 461	Student Teaching	12
EDUC 472	Competency Skills in Teaching Literacy	3
EDUC 473	Assessment in the Early Childhood/Childhood Classroom	3

*Spring Semester - Senior Year*

SPED 456 Human Development: Exceptionality

3

**Education Minor: Adolescence Education, Middle Childhood Specialist and Special Subjects: Business and Marketing (birth -12 gr.)**

Students completing the program meet the academic requirements of the New York State Education Department for certification in Adolescent Education (7-12 gr.) and Middle Childhood Specialist (5-9 gr.) or Business and Marketing (birth -12 gr.).

Each candidate must complete an academic major in the subject to be taught, together with professional education courses. In addition, a one-year program in the college-level study of a language other than English is required (total of 6 to 8 credit hours). The requirements include a full semester of student teaching.

Students who minor in Education receive an integrated blend of professional education methods coursework and field based opportunities in area schools that enable them to apply theory to classroom situations. These field-based experiences expose students to a diverse number of educational environments.

Students who wish to minor in Education must complete coursework in the arts and sciences that is rich in breadth and depth and fulfill requirements in basic competencies and areas of knowledge in the following subjects: written communication, mathematics, computer, literature, foreign language, arts, social science, historical studies and natural science.

Preparation for a career in Adolescence, Middle Childhood Education combines an academic major in a particular field, such as English or biology, with a Middle Childhood/Adolescence minor in the Division of Education. Adolescence Education, Middle Childhood Specialist subjects include biology, physics, chemistry, earth science, English, French, mathematics, social studies, Spanish and must be enrolled in the College of Liberal Arts and Sciences.

All students completing the program will receive certification in Adolescence Education (7-12). It is possible to receive an additional certification to teach Middle Childhood Education by completing additional coursework.

Students majoring in Business must be enrolled in the College of Business, and minor in Education.

A student preparing to teach in one of these areas should meet with an advisor in the Division of Education to integrate the education course requirements while planning a program of major studies.

**Prerequisite Courses**

EDUC 230 Psychological Foundations of Education

EDUC 231 Social Foundations of Education

**Admission to the Program**

To be admitted into this program, applicants must have the recommendation of a faculty member from their major division, together with a 2.75 cumulative GPA and a 3.0 average in EDUC 230 and EDUC 231. In addition, candidates are recommended to take the Liberal Arts and Sciences Test (LAST).

**Course Requirements**

- Completion of Basic Competencies and Areas of Knowledge required for Liberal Arts and Sciences.
- Completion of academic major in Liberal Arts and Sciences.

**Specific Pedagogical Core**

EDUC 345	Education Fieldwork	3
EDUC 405	Literacy in the Content Areas	3
EDUC 413	Using Literature in Intermediate/Adolescent Classrooms	3
EDUC 460	Seminar in Teaching and Professional Development	3
EDUC 462	Student Teaching for Middle/Adolescent Certification	12
EDUC 489	Current Teaching Methods: Middle Childhood/ Adolescence Subjects	3

**Middle Childhood Extension Certificate**

Those students who wish to complete additional certification in Middle Childhood must complete all coursework required for the Adolescence certification. Additionally, students must complete EDUC 488 - Current Teaching Methods: Middle Childhood Subjects.

**Education Minor: Art (PreK -12 gr.)**

Students completing the program meet the academic requirements of the New York State Education Department for certification in Visual Arts (PreK-12).

Each candidate must complete a major in Art, together with professional education courses. The requirements include a full semester of student teaching.

Students who minor in Education receive an integrated blend of professional education methods coursework and field based opportunities in area schools that enable them to apply theory to classroom situations. These field-based experiences expose students to a diverse number of educational environments.

Students who wish to minor in Education must complete coursework in the arts and sciences that is rich in breadth and depth and fulfill requirements in basic competencies and areas of knowledge in the following subjects: written communication, mathematics, computer, literature, foreign language, arts, social science, historical studies and natural science.

Preparation for a career in Adolescence, Middle Childhood Education combines an academic major in a particular field, such as English or biology, with a Middle Childhood/Adolescence minor in the Division of Education. Adolescence Education, Middle Childhood Specialist subjects include biology, physics, chemistry, earth science, English, French, mathematics, social studies, Spanish and must be enrolled in the College of Liberal Arts and Sciences..

All students completing the program will receive certification in Adolescence Education (7-12). It is possible to receive an additional certification to teach Middle Childhood Education by completing additional coursework.

Students must be enrolled in the College of Liberal Arts and Sciences and be majoring in Interdisciplinary Art, or be enrolled in the Bachelor of Fine Arts degree program in the School of Art and Design, and minor in Education.

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A student preparing to teach in one of these areas should meet with an advisor in the Division of Education to integrate the education course requirements while planning a program of major studies.

### Prerequisite Courses

EDUC 230	Psychological Foundations of Education
EDUC 231	Social Foundations of Education

### Admission to the Program

To be admitted into this program, applicants must have the recommendation of a faculty member from their major division, together with a 2.75 cumulative GPA and a 3.0 average in EDUC 230 and EDUC 231. In addition, candidates are recommended to take the Liberal Arts and Sciences Test (LAST).

### Course Requirements

- Completion of Basic Competencies and Areas of Knowledge required for Liberal Arts and Sciences.
- Completion of academic major in Liberal Arts and Sciences.

### Specific Pedagogical Core (Senior Year 2 or 3 Semesters)

EDUC 345	Education Fieldwork	3
EDUC 405	Literacy in the Content Areas	3
EDUC 413	Using Literature in Intermediate/Adolescent Classrooms	3
EDUC 460	Seminar in Teaching and Professional Development	3
EDUC 463	Student Teaching-Art Education	12
EDUC 490	Current Methods in the Teaching of Art	3

### Additional Program Requirements for ALL programs leading to New York State Teacher Certification

#### Examinations:

##### *\*Liberal Arts and Science Test (LAST):*

It is recommended that program candidates successfully pass the Liberal Arts and Science Test prior to entering their field placement semester.

##### *\*Assessment of Teaching Skills-Written (ATS-W):*

It is recommended that program candidates take the Assessment of Teaching Skills-Written (ATS-W) of the NY State Teacher Certification Examinations during or after field placement, prior to student teaching.

##### *\*Content Specialty Test (CST):*

Program candidates are recommended to take the appropriate Content Specialty Test (CST) for their certification area during their student teaching semester.

#### New York State Mandated Workshops:

All students must complete a state required workshop in Child Abuse Recognition and Reporting (CARR) and Safe Schools Against Violence in Education (SAVE). Both mandated workshops are offered to students through the Division of Education.

#### Fingerprinting/Background Check:

Program candidates applying for Initial (first) certification must complete the fingerprinting/background check packet. Fingerprinting packets can be obtained through the Division of Education office.

## English

The study of English fosters critical thought and imaginative insight. It also heightens an awareness and appreciation of the power, beauty, and passion of the written word. English majors learn to examine the world and their relationships to it through courses which emphasize analysis and the ways in which literature reflects culture. Through the experience of writing essays, stories, poems, and plays, students gain knowledge of the subtleties of language and respect for the exigencies of form. Class discussions increase students' opportunity, in Thoreau's words, to "live deliberately"; critical and creative writing promote their fluency with ideas and language.

### Requirements for the major

The major serves both the student who regards the study of English as a vital component of a liberal arts education and the future critic and writer. English majors graduate to pursue careers in teaching, writing, advertising, public relations, publishing, college administration, business, and related fields, or they go on to graduate schools in literature, writing, communications, journalism, library science, law, and business.

English majors are encouraged to assume responsibility for the direction of their education by developing a course of study based on their goals. From the numerous courses offered (see listings in the back of catalog), a total of 40 semester hours in English is required.

Students must complete 12 hours of study at the 200 level, as follows: ENGL 201, The Language of Literary Art; ENGL 223, Survey of British Literature; ENGL 241, Survey of American Literature. A minimum of 28 additional hours must be drawn from literature and writing courses at the 300 level. Of the 40 required hours, up to half (20 hours) may be taken in creative writing. ENGL 496, English Honors Thesis, is required only for those students seeking Honors in English and may be counted toward the minimum of 40 hours required for the major. ENGL 450, Independent Study, may not be counted toward the minimum of 40 hours required for the major.

ENGL 102, Writing II, is strongly recommended as a foundation course for all English majors.

**Prerequisites:** ENGL 201, The Language of Literary Art, for advanced writing courses, or another 200 level creative writing course; either ENGL 223, Survey of British Literature, **or** ENGL 241, Survey of American Literature, for advanced literature courses.

**Total Credit Hours:**

**40**

**Note:** Students who are not majors or minors in English but who wish to take English courses must fulfill the prerequisite of a 200 level literature course before taking an advanced literature course or a 200 level creative writing course before taking an advanced creative writing course.

### Minors

The English Division offers minors in Literature and in Writing.

**Requirements for a minor in Literature:**

18 credits of course work, 8 of which must be selected from among:

ENGL 201           The Language of Literary Art

ENGL 223           Survey of British Literature

ENGL 241           Survey of American Literature

Select 10 additional credits from 300-level courses in literature.

**Prerequisites:** Either ENGL 223 or ENGL 241, listed above, must be completed before beginning 300-level courses

**Total Credit Hours:** **18**

**Note:** ENGL 450, Independent Study, cannot be counted toward the minor in Literature.

**Requirements for a minor in Writing:**

18 credits of course work including ENGL 201, The Language of Literary Art, and not more than four additional credits in writing at the 200 level. A minimum of 10 additional credits must be selected from 300-level courses in writing.

**Prerequisites:** A 200 level creative writing course is a prerequisite for all advanced creative writing courses. Majors and Minors must also take ENGL 201, The Language of Literary Art

**Total Credit Hours:** **18**

**Note:** ENGL 450, Independent Study, cannot be counted toward the minor in Writing.

ENGL 102, Writing II, is strongly recommended as a foundation course for both the minor in Literature and the minor in Writing. ENGL 223, Survey of British Literature, **or** ENGL 241, Survey of American Literature, is also strongly recommended for writing minors.

## Environmental Studies

Since technological advances in our society have been accompanied by many life-threatening effects upon our physical surroundings, it has become a good citizen's responsibility to understand major environmental concepts. Some of us will pursue careers on behalf of the environment, trying to determine our species' suitable place within it.

The Environmental Studies major offers a multidisciplinary background and encourages looking at environmental problems from several points of view. Environmental projects and field experiences augment classroom learning. Faculty members are drawn from biology, geology, geography, mathematics, psychology, chemistry, political science, economics, and sociology.

Students have the option of choosing an Environmental Studies major with either a natural science or a social science emphasis. A third option is the environmental science track. Environmental Studies majors strongly interested in environmental careers or graduate training are encouraged to also complete requirements for a full major in a traditional academic discipline. Many of the same courses will meet the requirements of both majors.

Students can earn a master's degree in environmental management from Duke University through a cooperative 5-year plan between Duke and Alfred University. See the program advisor for more information.

**Requirements for the major – Natural Science Emphasis****A. Core requirements**

ENVS 101	Environmental Studies I – Natural Science	4
ENVS 102	Environmental Studies II – Social Science	4
ENVS 205	Environmental Data Analysis	4
ENVS 240	Environmental Research Procedures I	3
ENVS 241	Environmental Research Procedures II	3
ENVS 360	Junior Seminar	1
ENVS 440	Environmental Research Planning	2
ENVS 490	Senior Seminar	2
ENVS 499	Senior Year Project	2
ECON 201	Introduction to Economics and Markets	4
POLS 214	Politics and Environment	2 or 4

**B. Breadth requirements**

*Two courses from among the following:*

BIOL 111	Modern Biology with Human Implications	4
or BIOL 201	Biology I	4
CHEM 105	General Chemistry	4
ENVS 220	Introduction to Geographic Information Systems	4
GEOL 101	Physical Geology	4
PHYS 111	Introductory General Physics I	4
or PHYS 125	Physics I	4

*Two courses from among the following:*

ANTH 110	Cultural Anthropology	4
ECON 312	Environmental Economics	3
ENGL 293	A Place in the Universe	2
ENVS 201	Environmentalism	2
ENVS 245	Spirituality and the Environment	2-4
ENVS 415	Natural Resources Management	3
PHIL 281	Ethics	4
PSYC 289	Environmental Psychology	4

**C. Natural Science emphasis electives**

*Three courses (at least 11 credits) from among those listed, with no more than two 100-level courses.*

BIOL 202	Biology II	4
BIOL 311	Invertebrate Zoology	4
BIOL 322	Botany	4
BIOL 345	Vertebrate Natural History	4
BIOL 354	Ecology	4
BIOL 356	Aquatic Ecology	4
CHEM 106	General Chemistry II	4
CHEM 310	Basic Organic Chemistry	3
or CHEM 315	Organic Chemistry I	4
CHEM 316	Organic Chemistry II	4
CHEM 321	Introduction to Analytical Chemistry	4
ENVS 320	Advanced GIS Applications	4
ENVS 351	Environmental Biogeochemistry	4
GEOL 201	Surficial Geology	4
GEOL 301	Structural Geology	4
GEOL 307	Stratigraphy and Sedimentation	4
GEOL 464	Hydrogeology	4
PHYS 112	Introductory General Physics II	4
or PHYS 126	Physics II	4

**Requirements for the major – Social Science Emphasis****A. Core requirements**

ECON 201	Introduction to Economics and Markets	4
ENVS 101	Environmental Studies I – Natural Science	4
ENVS 102	Environmental Studies II – Social Science	4
ENVS 205	Environmental Data Analysis	4
or POLS/SOCI 230	Introductory Data Analysis & Statistics	4
or PSYC 220	Psychological Methods & Statistics	4
or BUSI 113	Business Statistics	4
ENVS 240	Environmental Research Procedures I	3
ENVS 241	Environmental Research Procedures II	3
ENVS 360	Junior Seminar	1
ENVS 440	Environmental Research Planning	2
ENVS 490	Senior Seminar	2
ENVS 499	Senior Year Project	2
POLS 214	Politics and Environment	2

**B. Breadth requirements**

*Two courses from among the following:*

BIOL 111	Modern Biology with Human Implications	4
or BIOL 201	Biology I	4
CHEM 105	General Chemistry	4
ENVS 220	Introduction to Geographic Information Systems	4
GEOL 101	Physical Geology	4
PHYS 111	Introductory General Physics I	4
or PHYS 125	Physics I	4

**C. Social Science emphasis electives**

*Five courses (at least 18 credits) from among the following:*

ANTH 110	Cultural Anthropology	4
ECON 202	Principles of Macroeconomics	3
ECON 312	Environmental Economics	3
ENGL 293	A Place in the Universe	2
ENVS 201	Environmentalism	2
ENVS 245	Spirituality and the Environment	2-4
ENVS 320	Advanced GIS Applications	4
PHIL 281	Ethics	4
POLS 411	Bureaucracy	4
PSYC 282	Social Psychology	4
PSYC 289	Environmental Psychology	4

**Requirements for the major – Environmental Science Track****A. Core requirements**

ENVS 101	Environmental Studies I – Natural Science	4
ENVS 102	Environmental Studies II – Social Science	4
ENVS 205	Environmental Data Analysis	4
ENVS 240	Environmental Research Procedures I	3
ENVS 241	Environmental Research Procedures II	3
ENVS 360	Junior Seminar	1
ENVS 440	Environmental Research Planning	2
ENVS 490	Senior Seminar	2
ENVS 499	Senior Year Project	2
MATH 151	Calculus I	4

**B. Breadth requirements***Twenty credit hours from the following:*

BIOL 201	Biology I	4
CHEM 105	General Chemistry I	4
CHEM 106	General Chemistry II	4
ENVS 220	Introduction to Geographic Information Systems	4
GEOL 101	Physical Geology	4
MATH 152	Calculus II	4
PHYS 111	Introductory General Physics I	4
or PHYS 125	Physics I	4
PHYS 112	Introductory General Physics II	4
or PHYS 126	Physics II	4

**C. Depth requirements***Three Courses (totaling at least 11 credit hours) from the following:*

BIOL 322	Botany	4
BIOL 354	Ecology	4
BIOL 356	Aquatic Ecology	4
CHEM 310	Basic Organic Chemistry	3
or CHEM 315	Organic Chemistry	4
CHEM 321	Introduction to Analytical Chemistry	4
ENVS 320	Advanced GIS Applications	4
ENVS 351	Environmental Biogeochemistry	4
GEOL 201	Surficial Geology	4
GEOL 464	Hydrogeology	4

**Requirements for the Environmental Studies minor**

ENVS 101	Environmental Studies I – Natural Science	4
ENVS 102	Environmental Studies II – Social Science	4
ENVS 240	Environmental Research Procedures I	3
ENVS 241	Environmental Research Procedures II	3

**plus** 8 credits of electives, selected by the student and minor advisor, chosen from the lists of natural science and social science electives (see above) and integrated to meet the student's objectives in environmental study.

**Total credit hours****22**

**Note:** Nearby Alfred State College offers a number of applied courses in a variety of environmental areas. Selections from among these offerings may be taken for transfer credit at Alfred University. Advisors can assist in such course selections; in some cases these may substitute for courses listed above.

**Equestrian Studies**

Students can combine a major from any division of the University with a minor in Equestrian Studies in order to meet their own personal goals and vision. For example combining Equestrian Studies with Business Administration enables a student to run a training operation, open a tack shop or other small equine-related business, or be able to handle accounting, marketing or sales for a large breeding operation. Students who choose to combine Psychology and Equestrian Studies can work towards certification in equine-assisted therapy. The Alfred University Equestrian Program is designed to offer students the opportunity to define their own needs and goals, and then create a career plan that assists them in achieving it.

**Requirements for the minor in Equestrian Studies**

The minor requires a total of 16 credit hours distributed as follows:

Choose at least 8 credits of theory courses and 4 credits of practical (activity) courses. The remaining 4 credits may be selected from either category.

**Theory Courses (4 credit hours each)**

EQUUS 201	The Art and Theory of Equitation
EQUUS 205	Introduction to Equine Science
EQUUS 210	Methods of Teaching English Riding
EQUUS 211	Methods of Teaching Western Riding
EQUUS 215	Equine Management
EQUUS 218	Judging Horse Shows
EQUUS 220	History of the Horse

**Activity Courses (2 credit hours each)**

EQUUS 101-104	English Riding, Levels I, II, III, and IV
EQUUS 105	Introduction to Dressage
EQUUS 107	Combined Training
EQUUS 110-113	Western Riding, Levels I, II, III, and IV
EQUUS 115	Dressage II
EQUUS 118	Introduction to Reining
EQUUS 120-121	Draft Horse Driving I and II

**General Science****Requirements for the major**

MATH 151	Calculus I	4
MATH 152	Calculus II	4
a total of 18 credit hours in either biology, chemistry, geology or physics		18
<b>plus</b> a total of eight credit hours in each of the other three sciences from the following list:		

**Biology**

BIOL 201	Biology I	4
BIOL 202	Biology II	4

**Chemistry**

CHEM 105	General Chemistry I	4
CHEM 106	General Chemistry II	4

**Geology**

GEOL 101	Physical Geology	4
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**Physics**

PHYS 111	Introductory General Physics I	4
PHYS 112	Introductory General Physics II	4

**Total credit hours** **50**

**Geology**

Studying geology helps students to gain an appreciation for their planet, its history, and the processes which operate within it. Students may select courses for enjoyment, choose courses in conjunction with other studies, or take courses in preparation for careers in geology. The major provides a background useful for employment or further studies in geology or a related field such as environmental studies, physical geography, planning, engineering, law or business.

A geology major includes an introductory level course; required courses in structural geology, mineralogy and petrology; advanced studies; and field experience.

### Requirements for the major

<i>Choose one introductory course from:</i>		4
GEOL 101	This Dynamic Earth	
GEOL 103	Earthquakes and Volcanoes	
GEOL 106	Elementary Oceanography	
GEOL 109	The Physical World	
<i>and take the following four courses:</i>		
GEOL 201	Surficial Geology	4
GEOL 301	Structural Geology	4
GEOL 302	Mineralogy and Petrology	4
GEOL 464	Hydrogeology	
or ENVS 351	Environmental Biogeochemistry	4
<b>Total Credit Hours</b>		<b>20</b>

### General Geology Track:

In addition to the above 20 credit hours required for all tracks, take:

ENVS 205	Environmental Data Analysis	4
GEOL 304	Field Methods (or other approved field camp)*	2
<i>and 8 credits selected from the following:</i>		
ENVS 220	Introduction to Geographic Information Systems	4
ENVS 320	Advanced GIS Applications	4
ENVS 351	Environmental Biogeochemistry (if not used above)	4
GEOL 307	Stratigraphy and Sedimentation	4
GEOL 408	Tectonics	4
GEOL 414	Geophysics	4
GEOL 440	Glacial Geology	4
GEOL 464	Hydrogeology (if not used above)	4
<b>Total Credit Hours for General Track Geology Major</b>		<b>34</b>

### Planetary Science Track

In addition to the above 20 credit hours required for all tracks, take:

ASTR 302	Planetary Science	2
CHEM 105	General Chemistry I	4
CHEM 106	General Chemistry II	4
MATH 151	Calculus I	4
MATH 152	Calculus II	4
<i>and 8 credits selected from the following:</i>		
CEMS 235	Thermodynamics of Materials	4
CEMS 251	Mechanics of Materials	3
CHEM 343	Physical Chemistry I	3
CHEM 346	Physical Chemistry II	3
GEOL 408	Tectonics	4
GEOL 414	Geophysics	4
GEOL 464	Hydrogeology (if not used above)	4
<b>Total Credit Hours for Planetary Science Track Geology Major</b>		<b>46</b>

### Earth Science Education Track

In addition to the above 20 credit hours required for all tracks, take:

MATH 102	Mathematics for Early Childhood/Childhood Teachers	4
GEOL 304	Field Methods (or other approved field camp)*	2
<i>and 8 credits selected from the following:</i>		
ASTR 103	Introductory Astronomy	4

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ASTR 107	Elementary Astronomy Lab	2
ENVS 220	Introduction to Geographic Information Systems	4
ENVS 320	Advanced GIS Applications	4
ENVS 351	Environmental Biogeochemistry (if not used above)	4
GEOL 307	Stratigraphy and Sedimentation	4
GEOL 408	Tectonics	4
GEOL 414	Geophysics	4
GEOL 464	Hydrogeology (if not used above)	4
SCIE 110	Weather Elements	2
<b>Total Credit Hours for Earth Science Education Track Geology Major</b>		<b>34</b>

\*Other field activities may be used to fulfill this requirement. Arrangements should be made prior to the end of the junior year.

### Requirements for the minor

A Geology minor may be obtained by completing (with grades of “C” or better), one 100-level geology course and 16 credit hours of upper level geology courses. These may include CEMS 214 or CEMS 215. Total credit hours required: 20.

## Gerontology

We are already feeling the impact upon our society of the rapidly increasing number of people sixty-five and older. In the long run it will probably be as great a change as the previous shift of population from rural to urban centers. How we should prepare to meet the needs of this growing number of older citizens is a crucial concern.

The gerontology major and minor offer an interdisciplinary approach to understanding the aging process and the new problems society is facing with the aged. The student majoring in gerontology studies psychological, social, political, biological, and long-term health care aspects of aging.

The major also provides for the application of classroom knowledge to real-life situations through a supervised internship. Participating faculty members are drawn from psychology, biology, sociology and political science.

### Requirements for the major

#### Complete all of the following:

BIOL 119	Physiology of Aging	4
GERO 118	Introduction to Adult Development and Aging	4
GERO 429	Cognition and Aging	2
GERO 450	Independent Study	2
GERO 485	Gerontology Internship	4
POLS 355	Public Policy	4
PSYC 210	Communication and Counseling Skills	2
PSYC 371	The Psychology of Death and Dying	4
SOCI 253	Social Welfare Institutions	2

#### Select one course from each of these two groups:

GERO 300	Special Topics in Gerontology	2
GERO 497	Senior Seminar in Gerontology	2

PSYC 220	Psychological Methods and Statistics	4
SOCI 230	Intro to Data Analysis and Statistics	4
<b>Total credit hours</b>		<b>36</b>

**Requirements for the minor****Complete all of the following:**

GERO 118	Introduction to Adult Development and Aging	4
GERO 429	Cognition and Aging	2
GERO 300 or GERO 497	Special Topics in Gerontology Senior Seminar in Gerontology	2
GERO 485	Gerontology Internship	4

**Select 8 credit hours from the following:**

BIOL 119	Physiology of Aging	
GERO 450	Independent Study	2-4
POLS 355	Public Policy	
PSYC 210	Communication and Counseling Skills	
PSYC 322	Health Psychology	2-4
PSYC 371	The Psychology of Death and Dying	2-4
SOCI 253	Social Welfare Institutions	

**Total credit hours** **20**

**Global Studies**

The goal of the Global Studies program is to increase understanding not only of the variety and complexity of modern human patterns, grounded in particular environments, from sub-cultures and ethnic groupings to nation-states, but also of their connections and interactions, and of their consequences. To accomplish this, the major includes a required introduction to Global Studies and Intercultural Communication, a broad selection of core courses in contemporary global issues across the curriculum and a capstone global issues seminar emphasizing original research based on study abroad experience. Students have a choice of three tracks: General Global Studies; International Relations; or International Business.

**Requirements for the major****Foundation Courses (Required)**

Modern Languages: second year competency (4 semesters) and one additional course at the 300 or 400 level or one year of another language 4

Study Abroad: one semester required, two semesters recommended

OCST 301	Study Abroad Preparation and Review	2
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**Core Courses:**

ANTH 110	Cultural Anthropology	4
ECON 202	Principles of Macroeconomics	3
GLBS 101	Intro to Global Studies and Intercultural Communication	4
GLBS 495	Global Issues Seminar	4
HIST 107	The World in the 20 <sup>th</sup> Century	4
POLS 271	World Politics	4

**Complete one of three tracks:**

**1. General Global Studies Track:** Choose 16 elective credits from at least two of the Elective Categories A-F, including at least 2 courses at the 300/400 level.

**2. International Relations Track:** Choose 16 elective credits from the Elective Categories A, B, C and D, including at least 2 courses at the 300/400 level.

**3. International Business Track:** Choose 15 elective credits from Elective Category C, including at least 2 courses at the 300/400 level.

**Categories of Electives***A. History*

HIST 151	The Rise and Fall of Iberia, 1450-1950
HIST 300	Topics in History (upon approval by Director of GS program)
HIST 302	The Vietnam War
HIST 316	Modern Europe II: Nationalism and Imperialism
HIST 383	Nazi Holocaust
HIST 387	Modern France

*B. Political Science*

POLS 251	Western Europe
POLS 252	Asian Politics
POLS 262	African Politics
POLS 282	Latin American Politics

*C. Economics and Business*

ECON 201	Introduction to Economics and Markets
ECON 202	Principles of Macroeconomics
ECON 412	International Economics
FIN 458	International Financial Management
BUSI 457	International Business
MKTG 489	International Marketing
ECON/BUSI/ FIN 460	Topics Seminars (upon approval by Director of GS program)

*D. Cultural Anthropology/Interdisciplinary Studies*

ANTH 303	Health and Culture
ANTH 304	Language and Culture
ANTH 309	Magic and Religion: An Anthropological Perspective
ANTH 312	The Anthropology of Violence
ANTH 320	The Islamic World
ANTH 400	Special Topics in Anthropology
FREN 210	Global Perspectives: Paris
FREN 316	Contemporary French Culture
FREN 401	French-speaking Africa
GRMN 316	German History and Culture
SPAN 404	Latinos/as in the United States

*E. Art/Literature/Communications*

ARTH 301-302	African Art I and II
ARTH 363	Ceramics and Cultural Identity: Global Traditions & Innovations
ARTH 490	Issues in Non-Western Art Seminar
COMM 300, 400	Topics in Communications (upon approval)
ENGL 252	World Literature II
ENGL 322	Irish Literary Traditions: 1690 to Present
ENGL 381	International Women Writers
FREN 310	Reading French Texts
FREN 312	French Literature II
GRMN 313	German Literature II
IART 200, 300	Topics (upon approval)
SPAN 312	Peninsular Culture and Literature II: 19 <sup>th</sup> - 20 <sup>th</sup> Century
SPAN 316	Latin American Culture and Literature II
SPAN 400	Topics in Hispanic Literature
SPAN 402	Readings in Modern Latin American Literature
THEA 210	The Performing Arts: A Global Perspective

*F. Philosophy and Religion*

RLGS 105	Introduction to World Religions
RLGS 252	Judaism and Islam
RLGS 305	Comparative Mythology

RLGS 307	Myth, Ritual, and the Creative Process
RLGS 308	Artists, Shaman, and Cosmology
RLGS 359	History of Chinese Thought
RLGS 369	Buddhism
RLGS 374	Myth, Yoga, and Philosophy of India

**Total credit hours** **44-45**

### Global Studies Minor

#### Foundation Courses:

Modern Languages: second year competency required  
Study Abroad: at least one semester recommended

#### Core course:

GLBS 101	Intro to Global Studies and Intercultural Communication	4
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#### Electives:

After consultation with the Global Studies advisor/program director,  
choose 2 of these Global Studies core courses: 8

ANTH 110	Cultural Anthropology
HIST 107	The World in the 20 <sup>th</sup> Century
POLS 271	World Politics

*Plus 8 credits at the 300 or 400 level from the Global Studies electives* 8

**Total credit hours** **20**

## Health Studies

The minor in Health Studies provides an interdisciplinary opportunity for students to formally examine and explore diverse aspects of health care in the U.S. and abroad.

#### Requirements for the minor

SOCI 349	Medical Sociology	3
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*Select an additional 17 credit hours from the following:*

ANTH 303	Health and Culture	4
ANTH 312	Anthropology of Violence	2-4
BIOL 110	Medical Terminology	2
BIOL 111	Modern Biology with Human Implications	4
BIOL 119	Physiology of Aging	4
BIOL 230	Nutrition in Health and Disease	2
GERO 118	Introduction to Adult Development and Aging	4
PSYC 322	Health Psychology	2-4
PSYC 330	Neuropsychology	4
PSYC 371	The Psychology of Death and Dying	4

**Total credit hours** **20**

**Note: Additional courses, independent studies, or internships may be counted toward the minor with the approval of the Health Studies minor advisor.**

## History

“Bunk,” Henry Ford called history. “A pack of tricks we play on the dead,” said the French writer Voltaire. And yet we all know that a society’s understanding of what it is and what it wants to be can be grounded only upon an understanding of what it has been. Our history shapes our identity.

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Alfred University's history program offers a thorough grounding in not only American society, but European and some non-Western societies as well. It covers eras of war and peace, reaction and revolution, and approaches the past comprehensively by analyzing political, cultural, social, intellectual and military development.

Attention is given to the needs of both the student who regards historical study as a vital component of a general liberal arts education and the student who plans to become a professional historian. Among recent graduates are lawyers, people in business, professional historians, legislative aides, teachers and civil servants.

### Requirements for the major

From the numerous courses offered (see listings in back of catalog) a total of 34 credit hours in history is required. Of these hours, 26 must be drawn from the 300 or 400 level, and the student must complete eight hours in American and 8 hours in non-American history at the 300 or 400 level.

**Total credit hours** **34**

### Requirements for the minor

The minor in history requires completion of two General Education history courses, plus 12 credits of history at the 300 or 400 level.

**Total credit hours** **20**

**Note:** Historians and other faculty in the Division of Human Studies are responsible for *Historical Reflections*, a journal of intellectual and cultural history published three times a year.

## Interdepartmental Major

The Interdepartmental Major offers students flexibility in arranging a program to suit their individual interests, aspirations, and abilities. The program is especially appropriate for a student with definite academic objectives which do not fit into other regular programs, or when a student's objectives can be met through a broad, general course of studies. Students selecting this program need to work closely with their faculty advisors to be sure their appropriate professional and career goals are met.

In addition to the other college degree requirements, students in this major select an additional 40 credit hours from those disciplines covered by the General Education Program's Areas of Knowledge (see p. 75), including at least four credit hours from each of the six areas. In selecting this total of 40 credit hours, students are not limited to the 100 - 200 level courses. Students are also required to complete 24 credit hours of academic course work at the 300 level or above. All courses to be counted in the major must have a grade of C or better.

## Mathematics

The mathematics program serves a variety of purposes:

- maintaining a vigorous and flexible program for mathematics majors
- providing the necessary mathematical foundations for engineering and science students
- offering an introduction to modern quantitative methods for students of management, economics, and the social sciences

The mathematics major gives the student a sound foundation in modern mathematics and its applications. The major is quite flexible, allowing for emphasis on pure or applied mathematics. In recent years mathematics majors have found excellent placement in a number of fields, including actuarial, computer applications and Ph.D. study.

#### Requirements for the major

MATH 151	Calculus I	4
MATH 152	Calculus II	4
MATH 253	Calculus III	3
MATH 254	Stoke's and Green's Theorems	1
MATH 281	Problem Solving through Problems	4
MATH 271	Differential Equations	3
MATH 371	Linear Algebra	4
MATH 481	Modern Algebra	4
MATH 491	Advanced Calculus	4
<i>plus 6 credit hours in mathematics courses numbered above 240.</i>		
<b>Total credit hours</b>		<b>37</b>

Most students follow one of the following three options:

#### Business Option

The Business Option is for students preparing for a mathematics-oriented career in the business world. This option emphasizes statistical and decision-making techniques. Students are encouraged to take various business courses as electives, along with the following mathematics courses:

MATH 351	Introduction to Operations Research	4
MATH 381	Mathematical Statistics	4
MATH 421	Numerical Mathematics	4

#### Scientific Option

The Scientific Option emphasizes the application of mathematics to the physical sciences. Interested students are advised to take science courses, such as physics, as electives, as well as the following mathematics courses:

MATH 381	Mathematical Statistics	4
MATH 401	Advanced Engineering Mathematics	4
MATH 421	Numerical Mathematics	4

#### Middle Childhood/Adolescence Education Option

This option is for students who plan a middle school or high school teaching career. In addition to the required Education program, students must take:

MATH 381	Mathematical Statistics	4
MATH 461	Geometry	3

#### Requirements for the minor

The minor in mathematics requires 22 credit hours of mathematics courses numbered 151 and above. It must include MATH 253 and at least one of these courses: MATH 351, MATH 371, MATH 401, MATH 481, MATH 491, MATH 421 and at least one other MATH course numbered 300 or above. Courses should be selected in consultation with the mathematics minor advisor.

<b>Total credit hours</b>		<b>22</b>
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## Interdisciplinary Art

The major in Interdisciplinary Art, leading to the BA degree in the College of Liberal Arts and Sciences, combines studio work in the arts with studies in art history, art theory and criticism, and cultural studies. The program draws faculty from the College of Liberal Arts & Sciences and from the School of Art & Design in the NYS College of Ceramics.

Interdisciplinary Art majors develop basic skills in the visual arts, an understanding of how to think about art making and performance, and a grasp of the interpretative problems that enter into the contemporary arts. The BA program is distinguished from the BFA program in the College of Ceramics by its greater emphasis upon the cultural setting of the arts, its stress on questions of interpretation, its broad grounding in the general education program of the College of Liberal Arts and Sciences, and its interdisciplinary ties to the Divisions of Human Studies and Performing Arts. There is no portfolio requirement for admission to the Interdisciplinary Art program.

The student who wishes to prepare for a career in art therapy or in art education should consult with the director of the Interdisciplinary Art major for a proper selection of courses in Psychology or in Education. In addition to these career options, recent graduates have opened their own studios, worked in galleries, and have entered graduate programs in the areas of art, art therapy, and law.

### Requirements for the major:

#### Core requirements

IART 101-104	Interdisciplinary Art I-IV	16
PHIL 283	Philosophy of the Arts I	4
ARTH 100-level	Art History	6
IART 460	Interdisciplinary Art Seminar	4
<b>Total core requirements</b>		<b>30</b>

In addition to the core requirements, students must complete one of the three concentrations below:

#### I Visual Arts Concentration

Visual studio electives (12 must be 300 level)	24
Theory elective	4
Art History elective	4

#### II Art History and Theory Concentration

Art History electives	16
Theory electives	8
Additional Art History/Theory electives <i>or</i> 8 studio credits, with permission of advisor	8

#### III Performance Concentration

1. Studio Electives in THEA, DANC, MUSC, ART*	24
2. Theory Elective*	7-8

**Total credit hours for the Major** **61-62**

**\*Studio and Theory Elective: Should be chosen in consultation with advisor to form a unified curriculum in Performance. In Music, only 100 level courses count toward requirement.**

**Requirements for the Interdisciplinary Art minor**

ARTH	Art History electives	6
PHIL 283	Philosophy of the Arts I	4
ART	Studio Art electives	12
<b>Total credit hours</b>		<b>22</b>

**Modern Languages**

An increasing number of careers demand proficiency in a second language. More students are choosing to study modern languages for professional enhancement every year. Others select foreign language study to broaden their intellectual horizons, to enjoy the literature of other countries and times, or to be able to travel with greater independence. Students in the College of Liberal Arts and Sciences are required to successfully complete the second semester of the first year of a foreign language or pass the placement exam. Students who plan to seek certification as foreign language teachers should consult the chair of the Education Division.

**French**

The Modern Languages Division offers a major in French in which students acquire proficiency in speaking, understanding, reading and writing. French majors acquire basic knowledge by taking core requirement courses in three areas: French language, culture, and literature.

Beyond this core, students are offered a series of elective courses allowing them to expand their knowledge in all three areas, or to specialize in one. Recent French majors have entered a variety of career paths including teaching, international business and technology, and government service.

**Requirements for the major in French**

(Prerequisites: FREN 101, 102, 201, 202 or equivalent)

**A. Core course: all of the following**

FREN 301	Advanced French Conversation	4
FREN 302	Advanced French Grammar and Composition I	4
FREN 310	Reading French Texts	4
FREN 311	French Literature I	4
FREN 312	French Literature II	4
FREN 316	Contemporary French Culture	4

**B. Elective courses: choose 12 credits from among the following:**

FREN 200/400	Topics in French	2-4
FREN 210	Global Perspectives: Paris	2
FREN 303	Advanced French Grammar and Composition II	4
FREN 360	Literary Theory Seminar	4
FREN 401	French Speaking Africa	4
FREN 450	Independent Study	4
LING 120	Introduction to Linguistics	4

**Total credit hours** **36**

It is expected that French majors will pursue some independent study. They are also encouraged, although not required, to spend at least a semester in a French language Study Abroad program. (Contact the Study Abroad Office)

**Requirements for the minor in French**

(Prerequisites: FREN 101, 102, 201, 202 or equivalent)

Students wishing to minor in French take three required courses (FREN 301, FREN 302, FREN 310) for a total of 12 credit hours. They then select a minimum of 8 credit hours from the major level elective courses.

**Total credit hours** 20**German**

The Division of Modern Languages offers both a major and minor in German. Either option enables students to attain proficiency in speaking, comprehension, reading and writing.

With one of the largest economies in the world and a central role in the European Union, Germany is a key player in world politics. German majors are encouraged to travel to Europe to explore the cultures of German-speaking countries. Numerous opportunities to study abroad or to do an internship in a German-speaking country are available on a competitive basis. German majors have frequently combined this major with a wide range of other disciplines, including Business Administration, Ceramic Engineering, Political Science, and Environmental Studies.

Study for one or two semesters in a German-speaking country (generally during the Junior year) is expected of all majors and strongly suggested for the minor. The Study Abroad Office on campus will help students find a suitable program. Alfred University offers an exchange program in Trier for Business students and in Erlangen for engineering students.

**Requirements for the major in German**

(Prerequisites: GRMN 101, 102, 201, 202 or equivalent)

**A. Core Courses**

GRMN 301	Advanced German Conversation/Composition	4
GRMN 312	German Literature I	4
GRMN 313	German Literature II	4
GRMN 316	German History and Culture	4
GRMN 360	Literary Theory Seminar	4
GRMN 410	History of German Cinema	4
GRMN 400	Special Topics	4
GRMN 450	Independent Study	4

**Core Credits** 32**B. Elective Courses**

Choose six credits from the following. Other 300- and 400-level courses may be accepted in lieu of the courses below with approval from the major advisor.

ECON 412	International Economics	3
HIST 315	Nineteenth Century Europe	4
HIST 316	Twentieth Century Europe	4
LING 120	Introduction to Linguistics	4

**Elective Credits** 6

Study Abroad credit may transfer to satisfy part of the Core or Elective requirements. The language of instruction for the Study Abroad courses must be German.

**Total credits for major** 38**Requirements for the minor in German**

(Prerequisite: GRMN 101, 102, 201, 202 or equivalent)

Students wishing to minor in German must take four 300- or 400-level German courses. Study Abroad credit may transfer to satisfy up to three of these required courses. The language of instruction for the Study Abroad courses must be German.

**Total credit hours** 16

## Spanish

The Modern Languages Program offers a Spanish major giving students a proficiency in speaking, listening, reading, and writing. Through a core or requirements, Spanish majors acquire basic knowledge in three areas: Hispanic language, culture, and literature. Beyond this core, students are offered a series of elective courses allowing them to expand their knowledge in all three of the areas or to specialize in one.

Majors in Spanish decide to use their language proficiency in business, government service, teaching, or community services. Study abroad is strongly recommended for both majors and minors. The Study Abroad Office on campus will help students find a suitable program.

### Requirements for the major in Spanish

(Prerequisites: SPAN 101, 102, 201, 202 or equivalent)

#### Required Courses

SPAN 301	Advanced Conversation and Composition	4
SPAN 311	Peninsular Culture and Literature I	4
SPAN 312	Peninsular Culture and Literature II	4
SPAN 315	Latin American Culture and Literature I	4
SPAN 316	Latin American Culture and Literature II	4
SPAN 360	Literary Theory Seminar	4

#### Elective Courses (choose 12 credit hours):

SPAN 400	Topics in Hispanic Literature	4
SPAN 402	Readings in Modern Latin American Literature	4
SPAN 404	Latinos/as in the United States	4
SPAN 450	Independent Study	1-4

#### Total credit hours

**36**

*Plus, Spanish majors must complete a capstone exam given by the division.*

It is expected that Spanish majors will pursue some independent study. Although not strictly required.

### Requirements for the minor in Spanish

(Prerequisites: SPAN 101, 102, 201, or equivalent)

SPAN 301	Advanced Conversation and Composition	4
SPAN 311	Peninsular Culture and Literature I	4
or SPAN 312	Peninsular Culture and Literature II	
SPAN 315	Latin American Culture and Literature I	4
or SPAN 316	Latin American Culture and Literature II	
SPAN 360	Literary Theory Seminar	4

#### Choose 4 credit hours from:

**4**

LING 120 Introduction to Linguistics

SPAN 202 Spanish IV

Or any of the Elective Courses listed above (SPAN 400, 402, 404, or 450)

#### Total credit hours

**20**

## Music

All AU students have many opportunities for musical study and performance, regardless of degree, major, or minor. In addition to introductory music theory and appreciation, students can take classes in piano, voice, strings and woodwinds and/or study privately in voice or a variety of instruments including carillon. Students have unlimited access to fine pianos and practice rooms. String, woodwind and brass instruments are available for a modest rental fee.

Numerous vocal and instrumental ensembles, large and small, abound at AU, providing students with a wide range of opportunities for performance. Most ensembles are open to all students. Select groups require auditions. Students also may choose to participate in smaller chamber groups.

The Division of Performing Arts offers a Music Minor.

### Requirements for the Music minor

MUSC 110	Music Appreciation	4
MUSC 120	Music Theory I	4
MUSC 130	Class Piano I	2
MUSC 131	Class Piano II	2
MUSC 271-279	Music Ensembles	4
MUSC 101-108; 301-308	Private Lessons (on primary instrument or voice)	4
<b>Select 4 credit hours from:</b>		
MUSC 200	Special Topics	1-4
MUSC 211	World Music	4
<b>Total credit hours</b>		<b>24</b>

## Philosophy

The philosophy program acquaints the liberal arts student with people's thought systems, teaches the skills of critical thinking and examines the application of these skills to the work of the other disciplines. A student who graduates with a major in Philosophy should be knowledgeable about the history of Western thought, capable of logical analysis of contemporary issues, and skilled in discovering the presuppositions and arguments of diverse thought systems. The philosophy major is encouraged to take interdisciplinary work. Philosophy is excellent preparation for government, business and service professions, and for graduate and professional schools.

### Requirements for the major

Students choose one of two tracks:

#### General Philosophy

##### Required Courses: 12 credits

PHIL 282	Introduction to Logic	4
PHIL 311	Greek Philosophy	4
PHIL 312	Modern Philosophy	4

##### Elective Courses: 20 credits

PHIL	Philosophy Electives (12 credits must be above 300 level)	20
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**Total credit hours** **32**

**Philosophy of Religions****Required Courses: 12 credits**

PHIL 281	Ethics	
or PHIL 382	Philosophy of Religion	4
PHIL 311	Greek Philosophy	4
PHIL 312	Modern Philosophy	4

**Elective Courses: 24 credits**

PHIL	Philosophy Electives (4 credits must be above 300 level)	8
RLGS	Religious Studies Electives (8 credits must be above 300 level)	16

**Total credit hours** **36**

**Requirements for the minor**

A minor in philosophy consists of 20 credit hours, distributed as follows:

Required for all students:

PHIL 311	Greek Philosophy	
or PHIL 312	Modern Philosophy	4

*plus 16 additional credits in Philosophy including at least 8 above the 300 level.*

**Total credit hours** **20**

Students may substitute up to 4 credit hours in religious studies or other courses closely related to philosophy in content or methodology. Substitutions must be approved by the faculty advisor for this minor.

**Physics**

The physics major is for students who enjoy investigating the world around them by applying quantitative methods and fundamental physical principles.

Appropriate preparation includes, if possible, high school physics and four years of high school mathematics. The major is an intensive and individualized program in both theoretical and experimental physics, designed to give each student sound preparation for continuing exploration of pure or applied physics in either industry or graduate school.

To ensure maximum flexibility in meeting student goals, four concentrations have been devised, well-suited to the mix of experiences available at Alfred University. All four make use of the core of courses outlined below but differ in the course choices in the physics electives portion of the major. While allowing students to concentrate in one area of physics, this plan makes it easier for them to complete a major in physics while also majoring in one of several engineering curricula.

Concentrations are as follows:

**General Physics** – The concentration that allows maximum breadth in students' physics preparation.

**Astrophysics** – This concentration makes use of the University's considerable astronomy resources through the Stull Observatory and our astronomy minor.

**Solid State Physics** – A concentration taking advantage of the materials-related offerings of the Inamori School of Engineering in the NYS College of Ceramics. Students interested in earning two degrees: a BA in Physics and a BS in Materials Science and Engineering will find this option most attractive. (See special requirements for "Double Degrees on pg. 55.)

**Mechanical Systems** – This concentration includes the offerings in fluid mechanics, thermodynamics, heat transfer, and vibrating systems of AU’s Mechanical Engineering program. It is particularly appropriate for students seeking two degrees: a BA in physics and a BS in Mechanical Engineering. (See special requirements for “Double Degrees on pg. 55.)

In addition to these concentrations, we encourage students interested in other physics-related disciplines to discuss the possibilities of combining those interests with our major program.

### **Core Requirements for the major**

#### **First and Second Years:**

PHYS 125	Physics I	4
PHYS 126	Physics II	4
PHYS 325	Elementary Optics	2
PHYS 326	Elementary Modern Physics	2

#### **Third and Fourth years:**

PHYS 341	Advanced Physics Laboratory	2
PHYS 401	Quantum Physics	4
PHYS 421	Statistical and Thermal Physics	4
PHYS 423	Advanced Mechanics	4
PHYS 424	Advanced Electricity and Magnetism	4

*Plus a minimum of eight credit hours from one of the four concentrations:*

#### **General Physics concentration – 8 credits from among:**

Any of the courses outlined in the other concentrations, with no more than four credits from any one concentration.

#### **Astrophysics concentration – 8 credits from among:**

ASTR 302	Planetary Science	2
ASTR 303	Stellar Astronomy	3
ASTR 304	Galactic Astronomy and Cosmology	4
ASTR 307	Observational Astronomy	2

#### **Solid State Physics concentration – 8 credits from among:**

CEMS 344	Electrical, Magnetic, and Optical Properties	3
CEMS 347	Spectroscopy	2
CEMS 349	X-ray Characterization	2
CEMS 501	Solid State Physics	3

#### **Mechanical Systems concentration – 8 credits from among:**

MECH 321	Thermodynamics II	3
MECH 324	Fluid Mechanics I	3
MECH 415	Mechanical Vibrations I	3
MECH 424	Fluid Mechanics II	3

**Total credit hours** **38**

#### **Requirements for the minor**

Physics courses: PHYS 125 Physics I, PHYS 126 Physics II, PHYS 325 Elementary Optics, PHYS 326 Elementary Modern Physics and 8 hours of 300 and/or 400 level courses in physics (4 hours may be taken in astronomy).

**Note:** Since 300 and 400 level physics courses are only offered in alternate years, careful scheduling is necessary. PHYS 125, 126, 325 and 326 should be completed by the end of the sophomore year.

## Political Science

The Political Science major attracts students who want to achieve a basic understanding of political processes. Courses in other disciplines can be chosen to complement an individual's particular orientation as a Political Science major. In addition to providing preparation for graduate study, this program is useful background for those intending to enter government service, legal study, business, teaching, or journalism. The minor requirements are structured to give students a general understanding of the discipline, allowing enough flexibility for particular needs and interests.

### Requirements for the major

POLS 110	Introduction to American Politics	4
POLS 220	Perspectives on Political Science	2
POLS 230	Introduction to Data Analysis	4

### At least one course from each of the following three groups:

#### *American Politics:*

POLS 313	State and Local Politics	4
POLS 318	The Presidency	4
POLS 331	Parties and Elections	4
POLS 411	Bureaucracy	4

#### *Political Thought:*

POLS 120	Great Issues in Politics	4
POLS 340	Classical Political Theory	4
POLS 341	Modern Political Theory	4
POLS 346	American Political Thought	4

#### *Comparative and International Politics:*

POLS 251	European Politics	4
POLS 253	Dictatorship and Democracy	4
POLS 271	World Politics	4
POLS 282	Latin American Politics	4

*plus 14 additional credit hours in Political Science*

**Total credit hours** **36**

### Requirements for the minor in Political Science

POLS 110	Introduction to American Politics	4
POLS 120	Great Issues in Politics	
or POLS 271	World Politics	4
POLS 220	Perspectives on Political Science	2

*plus ten additional hours in Political Science*

**Total credit hours** **20**

### Requirements for the minor in Public Law

POLS 110	Introduction to American Politics	4
POLS 232	Judicial Processes	2
POLS 316	Constitutional Law	4
POLS 417	American Civil Liberties	2

*plus one course from the following:*

POLS 242	Approaches to Law	4
SOCI 345	Crime and Delinquency (Prerequisite SOCI 110)	4

**Total credit hours** **14-16**

*(plus four prerequisite credit hours if the student chooses SOCI 345)*

## Psychology

The psychology program provides majors with an opportunity to pursue their educational and career goals, and also provides essential courses about human behavior for students majoring in other fields. Many courses stressing the scientific and applied nature of the field are offered every semester. Opportunities for hands-on experience in practicum, research, and independent study courses are readily available. The student who decides to major in Psychology has five program options:

The *General Psychology Option* encourages breadth of study and allows flexibility in course selection. For students who wish to have a comprehensive exposure to the discipline, it provides a general knowledge of human behavior and psychological functioning that is useful in many types of careers.

The *Clinical/Counseling Psychology Option* is for students who wish to have a career in the human services. This option offers basic counseling and clinical theory, supervised applied skills training and internship experience and prepares students for employment with various agencies or for graduate study.

The *Experimental Psychology Option* emphasizes the scientific aspects of psychology, including theory, research methodology, statistical and laboratory skills. The program prepares students for Ph.D. study, and/or careers in primary or applied research (e.g., government or industrial research labs).

The *Business/Industry Option* is for students interested in careers where psychology and business intersect. Such fields include advertising, marketing, personnel management, and human factors engineering. The program prepares students for graduate study or careers in business and industry.

The *Child Psychology Option* is for students interested in the social and cognitive development of children from infancy through adolescence. The program includes a supervised experience working with children, either conducting research or applying counseling skills. This option prepares students for graduate study or employment in child-related fields.

### Requirements for the major

#### Option 1: General Psychology

##### Required courses:

PSYC 101	Introduction to Psychology	4
PSYC 220	Psychological Methods and Statistics	4
PSYC 330	Neuropsychology	4
PSYC 497	Senior Seminar	4

##### *One course from the following:*

PSYC 251	Principles of Learning and Behavior Modification	4
PSYC 311	Sensation and Perception	4
PSYC 332	Cognitive Processes	4

##### *Two courses from the following (limit – one Developmental course):*

PSYC 118	Introduction to Adult Development and Aging	4
PSYC 261	Cognitive Development	4
PSYC 262	Social Development	4
PSYC 282	Social Psychology	4
PSYC 341	Theories of Personality	4

*plus electives in Psychology to equal a total of 38 credit hours*

**Total credit hours** **38**

**Option 2: Clinical/Counseling Psychology****Required courses:**

PSYC 101	Introduction to Psychology	4
PSYC 220	Psychological Methods and Statistics	4
PSYC 210	Communication and Counseling Skills	2
PSYC 330	Neuropsychology	4
PSYC 341	Theories of Personality	4
PSYC 342	Abnormal Psychology	4
PSYC 491	Clinical Procedures	4
PSYC 492	Clinical Practicum	4
PSYC 497	Senior Seminar	4

*One course from the following:*

PSYC 118	Introduction to Adult Development and Aging	4
PSYC 261	Cognitive Development	4
PSYC 262	Social Development	4

*One course from the following:*

PSYC 251	Principles of Learning and Behavior Modification	4
PSYC 311	Sensation and Perception	4
PSYC 332	Cognitive Processes	4

**Total credit hours** **42****Option 3: Scientific Experimental Psychology****Required Courses:**

PSYC 101	Introduction to Psychology	4
PSYC 220	Psychological Methods and Statistics	4
PSYC 330	Neuropsychology	4
PSYC 411	Psychological Research and Design	4
PSYC 497	Senior Seminar	4

*Two courses from the following:*

PSYC 251	Principles of Learning and Behavior Modification	4
PSYC 311	Sensation and Perception	4
PSYC 332	Cognitive Processes	4

*Two courses from the following (limited to one Developmental course)*

PSYC 118	Introduction to Adult Development and Aging	4
PSYC 261	Cognitive Development	4
PSYC 262	Social Development	4
PSYC 282	Social Psychology	4
PSYC 341	Theories of Personality	4

*Six credit hours from the following:*

PSYC 352	Research Techniques	2-4
PSYC 450	Independent Study	2-6

**Total credit hours** **42****Option 4: Business/Industry****Required Courses:**

PSYC 101	Introduction to Psychology	4
PSYC 210	Communication and Counseling Skills	2
PSYC 220	Psychological Methods & Statistics	4
PSYC 282	Social Psychology	4
PSYC 302	Psychological Measurement	4
PSYC 330	Neuropsychology	4
PSYC 362	Industrial/Organizational Psychology	4
PSYC 497	Senior Seminar	4

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PSYC 118	Introduction to Adult Development and Aging	4
PSYC 262	Social Development	4
PSYC 261	Cognitive Development	4
PSYC 341	Theories of Personality	4

*One course from the following:*

PSYC 251	Learning and Behavior Modification	4
PSYC 311	Sensation and Perception	4
PSYC 332	Cognitive Processes	4

*Related study: 9 hours from the following:*

MGMT 328	Management and Organizational Behavior	3
*MGMT 472	Human Resources Management	3
MKTG 221	Marketing Principles and Management	3
*MKTG 452	Marketing Research	3
*MKTG 479	Consumer Behavior	3
*MKTG 486	Promotion Strategy	3
*EDUC 520	Career Development and Planning	3

\*Courses with prerequisites or requiring permission from instructor

**Total credit hours 47****Option 5: Child Psychology****Required Courses:**

PSYC 101	Introduction to Psychology	4
PSYC 220	Psychological Methods and Statistics	4
PSYC 261	Cognitive Development	4
PSYC 262	Social Development	4
PSYC 320	Parenting Seminar	2
PSYC 330	Neuropsychology	4
PSYC 497	Senior Seminar	4

*One course from the following:*

PSYC 282	Social Psychology	4
PSYC 341	Theories of Personality	4

*One course from the following:*

PSYC 251	Learning and Behavior Modification	4
PSYC 311	Sensation and Perception	4
PSYC 332	Cognitive Processes	4

*One course from the following:*

PSYC 471	Child Psychopathology	3
PSYC 472	Child Interventions	3

*Four credits from the following:*

PSYC 352	Research Techniques in Child Psychology	2-4
PSYC 485	Practicum	2-4
PSYC 492	Clinical Practicum (at an appropriate site)	4

**Total credit hours 41****Requirements for the minor****Required Core:**

PSYC 101	Introduction to Psychology	4
PSYC 220	Psychological Methods and Statistics	4

*Content Group I (one course)*

PSYC 251	Principles of Learning & Behavior Modification	4
PSYC 311	Sensation and Perception	4
PSYC 330	Neuropsychology	4
PSYC 332	Cognitive Processes	4

*Content Group II (one course)*

PSYC 118	Introduction to Adult Development and Aging	4
PSYC 261	Cognitive Development	4
PSYC 262	Social Development	4
PSYC 282	Social Psychology	4
PSYC 341	Theories of Personality	4
PSYC 342	Abnormal Psychology	4

*Electives in Psychology (eight credits required)*

**Total credit hours** **24\***

\*Note: eight hours must be at the 300 or 400 level

## Religious Studies

The Religious Studies minor allows students to gain new intellectual perspectives on their own religions, those of other cultures, and the nature of religion in general. Courses in both the Eastern and Western traditions and in comparative topics explore the religious experience of various peoples by examining the many ways that men and women have expressed their fundamental intuitions about themselves and their universe. Studying religions helps students to discover more about themselves and about the complex international world.

The study of religions is inherently interdisciplinary and includes such matters as the philosophical ideas of Augustine and Nagarjuna; the moral values of Confucius, Gandhi, and Martin Luther King; religious communities such as the Buddhist sangha and the Rev. Jim Jones' Peoples Temple; artistic accomplishments such as the cathedral at Chartres and Tibetan mandalas; myths such as the Zuni creation account and the Mahabharata; and rituals such as the Jewish Passover and the Ghost Dance of the American Indian.

Because religious beliefs, rituals and values bear upon all aspects of human life, the study of religion complements majors in many areas, such as literature, history, philosophy, the arts, education, and the social sciences. The study of religion also contributes a great deal to careers in the humanities and social sciences, and also enhances career opportunities in such areas as education, journalism, communications, international affairs, business, social work, counseling, the health professions, and, of course, the religious professions.

### Requirements for the minor in Religious Studies

**The minor consists of 20 credit hours, distributed as follows:**

One course in the Western religious traditions, one course in the non-Western religious traditions and 12 additional credits.

Students may substitute up to four elective credit hours in Philosophy, History, Anthropology, English, Psychology, or Sociology courses closely related to Religious Studies in content or methodology. Substitutions must be approved by the advisor.

## Sociology

The sociological method makes possible the systematic comparison of data from varied types of groups, societies, cultures and institutions. In this effort the student of sociology endeavors to formulate generalizations about the nature and causes of human social behavior.

As vocational preparation, the study of sociology provides an understanding of interpersonal and intergroup relationships. Sociology majors at AU go on to careers in such areas as social work, law, public health, business, and social research.

### Requirements for the major

#### Core Area

SOCI 110	Introduction to Sociology	4
SOCI 230	Introduction to Data Analysis and Statistics	4
SOCI 420	Social Theory: A Survey	4
SOCI 431	Research Design and Strategies	4
Electives		20
<b>Total credit hours</b>		<b>36</b>

These Anthropology courses may be counted as major electives:

ANTH 302	The Nacirema	4
ANTH 303	Health and Culture	4
ANTH 304	Language and Culture	4
ANTH 309	Magic and Religion: An Anthropological Perspective	4
ANTH 312	Anthropology of Violence	4

#### Requirements for the minor in Social Science Research

SOCI 110	Introduction to Sociology	4
SOCI/POLS 230	Introduction to Data Analysis and Statistics	4
SOCI 431	Research Design and Strategies	4
SOCI/POLS 475	Data Analysis Lab	4
Electives		

*Select 6 credit hours from among the following:*

POLS 220	Perspectives on Political Science	4
SOCI 400	Special topics (with permission of minor advisor)	1-4
<b>Total credit hours</b>		<b>22</b>

#### Requirements for the minor in Sociology

SOCI 110	Introduction to Sociology	4
SOCI 420	Social Theory: A Survey	4
SOCI 431	Research Design and Strategies	4
Plus eight additional credit hours		8
<b>Total credit hours</b>		<b>20</b>

## Theatre

All students, regardless of academic major, are enthusiastically encouraged to participate in faculty and student directed productions and to take Theatre courses. Performance opportunities and production options abound for those pursuing a Theatre degree. As well-rounded practitioners of theatre, majors are actively encouraged and expected to participate in all aspects of the annual main-stage productions in addition to course requirements. Opportunities are available in acting, all areas of design (scenic, lighting, costume, sound, props), stage management, construction, scenic painting, directing and producing. Theatre majors are prepared to move into a broad range of theatre-related occupations or graduate school, with emphases in performance, design and technical areas.

**Requirements for the Theatre major****Core Requirements: (29-31 credits)**

THEA 110	Introduction to Theatre	4
THEA 120	Technical Theatre	4
THEA 220	Principles of Theatrical and Performance Design	4
THEA 240	Acting I	4
THEA 311	Theatre History I	4
THEA 312	Theatre History II	4
THEA 430	Directing I	3
THEA 431	Directing II	
or THEA 495	Senior Project	2-4

**Electives in Theatre: (12 credits)**

THEA 200	Special Topics	1-4
THEA/ENGL 205	The Play's the Thing!-Playwriting	4
THEA 210	The Performing Arts: A Global Perspective	4
THEA/WMST 211	Women in Theatre	3
THEA 222	Stage Makeup	2
THEA 242	Performance Lab	3
THEA 270	Play Production	1-4
THEA 320	Scene Design	3
THEA 321	Lighting Design	3
THEA 322	Stage Costume Design	3
THEA 323	Stage Sound	2
THEA 340	Acting II	3
THEA 350	Independent Study	1-4
THEA 385	Internship in Theatre	2-4
THEA 431	Directing II	3
THEA 440	Acting III	3
THEA 470	Advanced Projects in Theatrical Design and Technology	1-4

**Related Fields: (6 Credits)**

ART 111	Introduction to Drawing	4
ART 121	Introduction to Sculpture	4
ART 133	Basic Black and White Photography	4
ARTH 100-level	(introductory Art History)	2
DANC 120	Fundamentals of Dance	2
DANC-technique	(DANC 221, 222, 223, 321, 322, 323)	2
DANC 230, 330	Improvisation/Composition I, II	3
DANC 270	Alfred University Dance Theatre	2
DANC 311	Dance History	4
ENGL 225	Shakespeare in Cinema	2 or 4
ENGL 311	Shakespeare's Comedies and Histories	4
ENGL 312	Shakespeare's Tragedies	4
ENGL 372	Dramatis Personae	4
MUSC 100-108	Private Lessons	1
MUSC 110	Music Appreciation	4
MUSC 120	Music Theory I	4
MUSC 130-139	Voice, Piano, Strings Classes	2
MUSC 270-279	Music Ensembles	2
MUSC 301-308	Private Lessons, Advanced	2
PHIL 283	Philosophy of the Arts I	4
RLGS 307	Myth, Ritual and the Creative Process	4
RLGS 308	Artists, Shamans and Cosmology	4

(other courses may be considered; must be approved by the Division Chair)

**Total credit hours required for major**

**47-49**

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A Theatre minor is also available for those students who wish to major in another field, yet devote serious effort to their development as theatre artists.

### Requirements for the Theatre minor

THEA 110	Introduction to Theatre	4
THEA 120	Technical Theatre	4
or THEA 220	Principles of Theatrical and Performance Design	3
THEA 240	Acting I	4
THEA 270	Play Production	1-4
THEA 311	Theatre History I	4
THEA 312	Theatre History II	4
THEA 430	Directing I	3
<b>Total credit hours</b>		<b>(minimum) 24</b>

## Violence Studies

The interdisciplinary minor in Violence Studies offers students the opportunity to focus critically on one of the most important and complex issues of social life. Through varied disciplines and courses, students examine the nature of violence at personal and societal levels, in the United States and abroad, in modern industrial societies and in preliterate societies, in the past and the present.

### Requirements for the minor

#### Required courses:

ANTH 312	The Anthropology of Violence	4
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#### Elective courses:

Students must choose at least two courses from either the list of Humanities options or from the list of Social Science options and at least one from the other set of options. At least one of the electives should be at the 300 level or higher.

#### Humanities options:

ENGL 234	Crime on Film	4
ENGL 279	The Vietnam War in American Literature	4
ENGL 290	War and Imagination	4
ENGL 312	Shakespeare's Tragedies	4
HIST 301	America in War during the 20th Century	4
HIST 302	The Vietnam War	4
HIST 303	The Civil War Era, 1830-1877	4
HIST 316	Twentieth-Century Europe	4

#### Social Science options:

CRIM 322	Juvenile Justice	2
CRIM 332	Focusing on Police	2
CRIM 340	Concepts of Penology	4
SOCI 344	Deviance and Society	4
SOCI 345	Crime and Delinquency	4

#### Supporting activities:

In consultation with the minor advisor, appropriate internships or activities may contribute toward the Violence Studies minor.

#### Total credit hours required

**16**

## Women's Studies

The interdisciplinary Women's Studies minor examines scholarship and research relating to women and to their special contributions.

The objectives of the minor are to provide a theoretical and practical structure within which to study issues of concern for women; to promote an understanding of the historical and biosocial contexts which shape our awareness of womanhood; and to encourage independent reading and study.

The Women's Studies minor is supportive of various majors. Students are invited to complete a minor in Women's Studies or to select courses of particular interest. All program courses can be used as electives and many count toward a major in traditional disciplines. Participating faculty are drawn from throughout the entire university.

### Requirements for the minor

#### Required Core

WMST 101	Women in Society	4
WMST 450	Independent Study	2

#### Elective Courses

Choose 12 or more credits from at least two groups (I, II, III, IV)

#### I: Humanities

##### English

WMST 218	Autobiography	2 or 4
WMST 254	Women Writers	2 or 4
WMST 256	Multicultural Literature	2 or 4
WMST 308	Women Writers in the Middle Ages	4
WMST 381	International Women Writers	4

##### History

WMST 324	Gay American History	4
WMST 374	American Women: History and Herstory	4

##### Philosophy

WMST 303	Women, Knowledge, and Reality	2-4
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#### II: Social Sciences

##### Political Science

WMST 246	Sex and the Body Politic	4
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##### Psychology

WMST 372	Psychology of Women	4
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##### Sociology

WMST 253	Social Welfare Institutions	2
WMST 346	Sociology of Sex and Gender	4
WMST 348	Sociology of Families	4

#### III: Fine and Performing Arts

##### Fine Arts

WMST 382	Women in Art	4
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##### Performing Arts

WMST 211	Women in Theatre	3
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#### IV: Women's Studies

WMST 450	Independent Study	1-4
WMST 470	Alphadelphian -Women's Studies Service	2
WMST 485	Internship	1-4