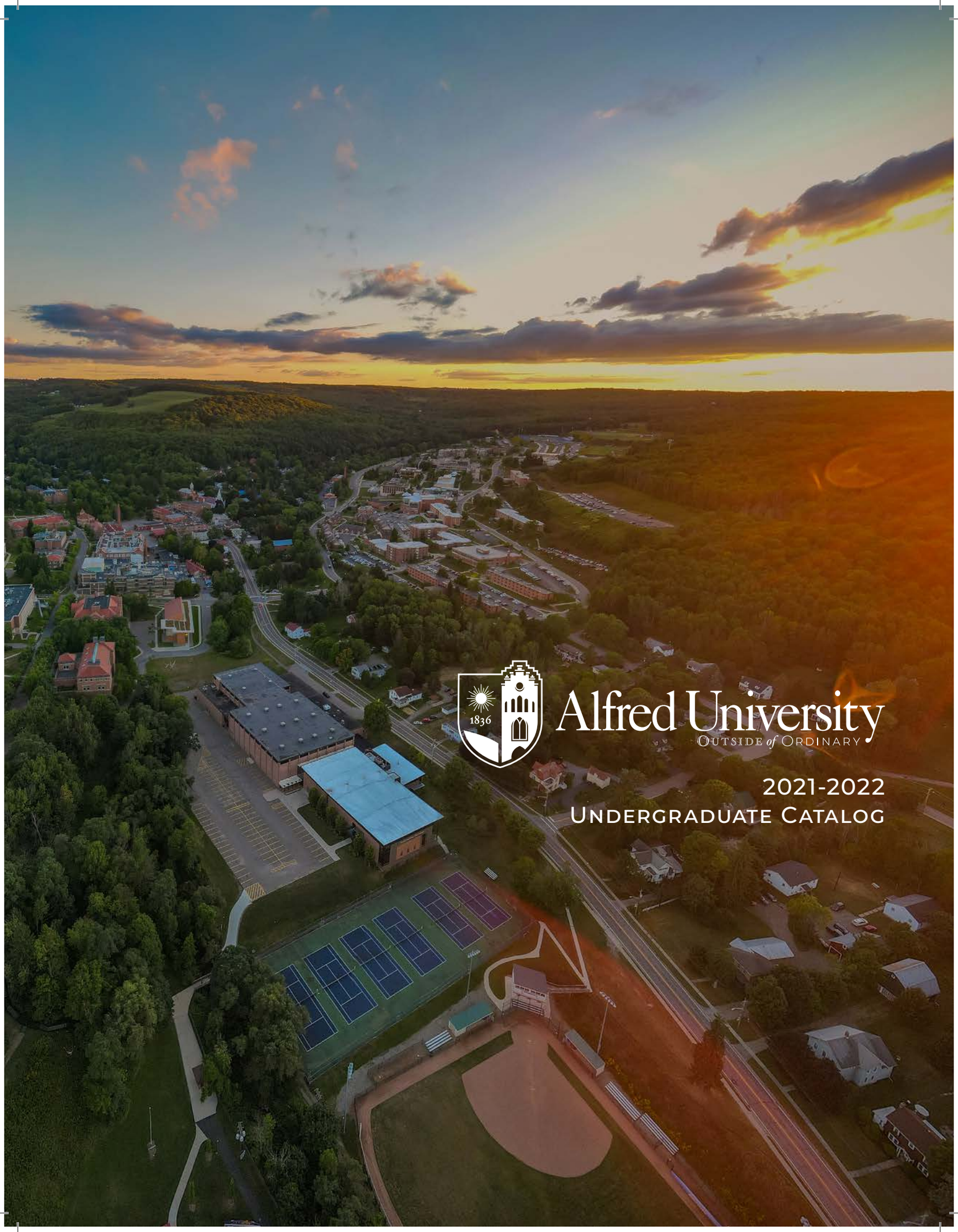

Alfred University

OUTSIDE of ORDINARY

2021-2022
UNDERGRADUATE CATALOG

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Disclaimer on Content Change

Alfred University strives to publish a catalog each year. Academic requirements for a degree coincide with the year a student is matriculated. The university makes every effort to ensure accuracy of the information provided. Students should be aware:

- That any content of the catalog can change and do not constitute an irrevocable contract between student and university. Students should be aware of their responsibility to keep apprised of current policies and requirements by viewing online portions of Academic Policy, etc.
- That admission to the university or registration of a given term does not guarantee availability of any specific course. Course availability is determined by student demand and instructor availability.
- That the State Education Department separately licenses all teaching personnel and independently approves all courses and curricula offered. Therefore, it is possible that courses/curricula listed in the school’s catalog may not be approved at the time that a student enrolls in the school, or the teaching personnel listed in the catalog may have changed.

Alfred At a Glance

Profile

Founded

1836, one of the first coeducational institutions in the United States.

Type of institution

Private, non-sectarian, with state-sponsored programs in engineering and art and design.

Location

Alfred, New York, a village in the foothills of the Allegheny Mountains about an hour west of Corning, an hour and a half south of Rochester and two hours from Buffalo.

Students

About 1,800 undergraduates and nearly 350 graduate students from 43 states and 16 countries attend full-time on the Alfred campus. We have approximately 80 additional part-time graduate students on the Alfred, NY campus, and 475 graduate students enrolled in our AUNY Corning and NYC-metro area programs.

Campus

232 acre campus with more than 50 academic and residential buildings. Residential, student-centered, vibrant living/learning community. Plus another 400 acres of nearby recreational land.

Admissions

Admission is selective. In general, admitted undergraduate students have an A, B+ or B high school average and the middle 50% have SAT scores between 910 and 1140. Admitted graduate students should have a 3.0 GPA or better.

Financial Aid

More than 95% of the entering first year class receives some type of financial assistance: university, federal, state and private.

Graduates

Surveys of AU graduates consistently reveal that one year after graduation our students have a 97% career outcomes rate.

Academics

Programs

More than 40 undergraduate majors/programs. We also offer internships, research and study abroad opportunities in the following schools and colleges:

- College of Business
- College of Liberal Arts and Sciences
- Inamori School of Engineering
- School of Art and Design
- Division of Performing Arts
- The NYS College of Ceramics

Class Size

Average class size is 18 students. Student/Faculty ratio is 13:1.

Faculty

90% of the faculty have doctorates or terminal degrees in their discipline. Teaching is a faculty priority.

Academic Calendar

Two semesters, an Allen Term (Winter Term) and two summer term sessions.

Libraries

Two libraries with extensive electronic resources supporting undergraduate and graduate programs.

Research

Undergraduate research is the hallmark of an Alfred University degree. AU's research programs and "Centers for Excellence" complement academic programs.

Technology

100% network-wired, with wireless zones in selected locations. The ratio of students to computers in labs, clusters and classrooms is 6:1. There is a laptop lending program and a fully-staffed Information Technology Services Help Desk.

Student Life

Clubs and Organizations

More than 80 student-run recognized clubs and organizations.

Athletics

AU Saxons compete on 22 varsity teams including 19 NCAA Division III sports, one USCSA (United States Collegiate Ski and Snowboard Association) sport, one NCA (National Cheerleading Association) and two IHSA (Intercollegiate Horse Show Association) sports. Roughly 30% of all undergraduates play a varsity sport, and approximately half of all AU students participate in either intramural or club sports. Learn more about AU Athletics.

Accreditation

Alfred University is accredited by

- Middle States Commission on Higher Education
- New York State Board of Regents, and the Commissioner of Education
- Accreditation Board of Engineering and Technology
  (Programs in Ceramic Engineering, Glass Engineering Science, Materials Science and Engineering, Electrical Engineering and Mechanical Engineering)
- American Chemical Society
- National Association of Schools of Art and Design
- American Psychological Association, Commission on Accreditation
- Association to Advance Collegiate Schools of Business
- Commission on Accreditation of Athletic Training Education
- National Association of School Psychologists
- Commission on Accreditation of Counseling and Related Educational Programs

Teacher Certification Exam Passage Rate

The Title II Reporting Center (the Higher Education Act of 1965), which mandates National Teacher Preparation Data, reports that Alfred University has an 85% passage rate for teacher certification exams for the most recent year for which data is available (2017-18).

Rankings

Alfred University’s reputation among several third-party sources, including Forbes and The Princeton Review, is second to none. We're proud to know that we measure up to almost any other institution, regardless of what measures you use.

Take a look at our latest Awards & Accolades

AU scored on par with or better than NYU, SUNY ESF, NC State, Buff State, SUNY Geneseo, Auburn, Loyola, and Saint John Fisher in the Brookings Institution’s "value added" assessment of about 4,000 schools nationwide.

Alfred University's Master of Fine Arts degree programs in ceramic art (#1) and glass/sculpture (#9) once again top the national rankings list of similar curriculums, according to US News & World Report. Overall, AU was ranked #3 in the fine arts. Also on the report, AU made lists for "Top Regional Universities in the North," "Top Business Programs," and "Best Value Schools."

Forbes and the Princeton Review include Alfred University in their listings of the top schools in the country.

Alfred is ranked in the top by Niche 2020 Best Colleges in categories such as "Best Colleges for Art in America," "Best Small Colleges in America," "Colleges with the Best Professors in America," "Top Private Universities in America," and "Best Colleges in America."

Value Colleges rated Alfred University #16 in the "Top 50 Best Pre-College Summer Program" for 2020, among the likes of Yale, UCLA, Georgetown, and Virginia Tech, based on the quality, affordability, and potential our summer programs provide to young people.

Our Mission

Vision

Alfred University will be an innovative leader in the delivery of academic excellence and enduring educational value, preparing all students for success in their studies and throughout life.

Mission

The mission of Alfred University is to provide excellent quality and enduring value through academic and co-curricular programming that is both intellectually challenging and practically relevant. We are culturally diverse and student-centered, and aim to serve an ever-changing student population. We seek students with the aspiration and dedication to do well for themselves and for their greater communities. Thus, we prepare our students with the knowledge, skills, and life-habits that will enable them to succeed and to live lives of continuous personal growth and service to others. These outcomes are achieved through a commitment, by the entire Alfred University community, to teaching and research, the pursuit of scientific and technical expertise, artistic creativity, and humanistic learning.

Values

At Alfred University, we value:

- A learning environment that promotes open exchange of ideas, critical thinking, global awareness, technological literacy, intellectual honesty, and community involvement;
- A work environment that promotes open communication, recognition of achievement, and the development of personal potential;
- Research and scholarship that advance the frontiers of knowledge, contribute to graduate and undergraduate teaching, and demonstrate creativity in all fields of endeavor;
- Diversity in people and cultures, ideas and scholarship;
- A campus that is safe, attractive, and promotes health and wellness;
- A caring community that respects each individual, fosters intellectual curiosity and growth, promotes and models good citizenship, and encourages enlightened leadership.

Academic Calendars

The Alfred University academic calendar consists of two 15-week semesters (inclusive of final exams), each with 75 scheduled class meeting days; one 12-week Summer Term (in 6 Sessions); and one 4- to 5-week term between semesters, called “Allen Term,” (Winter Term) in which short-term faculty-led travel courses and online courses are offered. During Fall and Spring semesters, some 2-credit courses are offered in a half-semester format, meeting only in A-Block (first half) or in B-Block (second half).

The Academic Calendars for 2020-21 and 2021-22

Admissions

First-Year Applicants

Students will be considered for admission if they are secondary school graduates in a college preparatory program or when they submit evidence of having completed an equivalent degree of education. The secondary school program should include a minimum of 16 academic units. Each academic division of the University suggests a different distribution of the academic units, as follows:

College of Liberal Arts and Sciences

- 4 units of English
- 3-4 units of social studies and history
- 2-3 units of college preparatory mathematics
- 2 units of laboratory science (biology, chemistry, and physics)
  The remainder of the 16 academic units should be earned within the fields listed or in a foreign language.

College of Business

- 4 units of English
- 3-4 units of social studies and history
- 3-4 units of college preparatory mathematics
- 2-3 units of laboratory science
  The remainder of the 16 academic units should be earned within the fields listed above, in a foreign language, or in business courses.

School of Art and Design

- 4 units of English
- 3-4 units of social studies and history
- 2 units of college preparatory mathematics preferred
- 2 units of laboratory science
- Portfolio (see below)
  The remainder of the 16 academic units should be earned within the fields listed above, in a foreign language, or in art courses.

Inamori School of Engineering

- 4 units of English
- 4 units of college preparatory mathematics preferred (algebra I and II, geometry, pre-calculus and/or calculus)
- 3 units of laboratory science (biology, chemistry, and physics preferred)
- 2-3 units of social studies and history
  The remainder of the 16 academic units should be earned within the fields listed above, in a foreign language, or computer science.

Procedures for First Year Applicants

Applicants should submit the following items when applying for admission:

- Application for Admission along with a $50 nonrefundable fee or a fee waiver certificate
- An official high school transcript which includes all academic work to date
- At least one letter of recommendation (guidance counselor, teacher, principal, headmaster, etc.)
- Essay
- Results from ACT or SAT tests
- School of Art and Design applicants please refer to the School of Art and Design Portfolio Requirements section

Forward all items to:
Office of Admissions
Alfred University
1 Saxon Drive, Alumni Hall
Alfred, New York 14802

In addition, all applicants are strongly encouraged to visit the campus. To schedule an appointment, contact the Office of Admissions (800-541-9229 or email) at least two weeks prior to the visit. During a campus visit, a student can take a campus tour, have an admissions interview, meet with a financial aid counselor, attend a class, meet with a faculty member, and/or meet with a coach. Specialized tours are available for students interested in the School of Art and Design and the Inamori School of Engineering.

Application Deadlines

- December 1 - Early decision for fall enrollment.
- February 1 - Priority deadline for regular fall enrollment.
  This includes the portfolio deadline for Art and Design.
- December 1 - Deadline for spring enrollment. (First Year applications for spring enrollment are not accepted from students wishing to major in Art and Design.)

School of Art and Design Portfolio Requirements

Applicants are strongly encouraged to submit the required portfolio electronically through our SlideRoom portal. Your portfolio should include 15 to 20 samples of work, four of which should be drawing from direct observation. You may upload images (jpg), video (mov, wmv, flv), music (mp3) or pdf files.

For good image quality and fast upload, image files should be sized with a maximum dimension of 1024 px @ 72 dpi. Please keep video files under 60 MB each.

There is a nominal non-refundable fee for this service and an email address is required to register. SlideRoom's online portal offers additional instructions for submitting your work. If you need technical assistance, please email.

The deadline for early decision is December 1. The deadline for regular admission is February 1. Dates for submitting transfer student portfolios vary and are outlined in Transfer Admissions.

First Year Applicant Options

Early Action

The early action admission option offers applicants that consider Alfred University as one of their top choices the opportunity to apply for the fall semester by November 1 and receive a decision by December 15. Accepted early action candidates will have until May 1, 2021 to make their decision on attending Alfred University.

- Submit the application for admission.
- Ask your high school guidance office to submit an official academic transcript, letter(s) of recommendation to the Office of Admissions, and SAT/ACT scores if you'd like considered (Alfred University if test-optional) by November 15.
- School of Art and Design applicants please refer to the School of Art and Design Portfolio Requirements section.

Final acceptance is contingent upon successful completion of the senior year. Early action applicants who are not accepted may be deferred to regular decision and reviewed by mid-March for the fall semester. For early action candidates, a $300 non-refundable deposit is due by May 1.

Financial aid applicants will receive a financial aid award with your acceptance. Please complete the free application for federal student aid (FAFSA) by November 15 to receive an award with your acceptance.

Deferred Admission

Alfred University understands that some students may benefit by postponing entrance for a year. To defer admission:

- Follow the application procedures for regular admission, including paying the enrollment deposit.
- Notify the Office of Admissions by August 1 of the intention to delay entering the University for the upcoming spring semester or the following fall semester.

Should the one year deferment period lapse without written notification, the $300 deposit will automatically be forfeited. A deferral student who enrolls at another college sacrifices the deposit and relinquishes his/her place in the first year class. Such students may reapply as transfer students and, if accepted, will have the previous deposit applied toward first semester tuition charges.

Common Application

Alfred University is a member of the Common Application and only accepts applications through Common Application for undergraduate admission. Common Application forms are available at high school guidance offices or online.

Notification of First Year Applicants

Notification for Early Action applicants begins in November and continues on a rolling basis until December 1 for all on-time applications. Notification for Regular Decision applicants begins in late November and continues on a rolling basis.

When the Office of Admissions receives the final secondary school transcript with graduation date, an acceptance becomes final. Applicants must also fulfill any specific requirements set by the Committee on Admissions.

A $300 deposit for fall semester enrollment is due by May 1, or within two weeks of admission notification for those accepted after May 1. Students enrolling in January should submit the deposit by December 15, or within two weeks of acceptance if notified after December 15.

Of the $300 deposit, $100 is credited toward matriculated students' first semester charges and $200 is held throughout a student's enrollment. This is returned, less any unpaid University charges, after graduation or withdrawal (if done in accordance with established procedures). The $300 deposit is non-refundable to those who choose not to attend Alfred University.

Admissions

Alfred University seeks talented, motivated students, nationally and internationally, of diverse cultural, ethnic, and economic backgrounds, who will contribute to the campus learning community, with particular attention to students who will pursue intellectual and cultural achievements consistent with the University mission.

The mission of Alfred University is to provide excellent quality and enduring value through academic and co-curricular programming that is both intellectually challenging and practically relevant. We are culturally diverse and student-centered, and aim to serve an ever-changing student population. We seek students with the aspiration and dedication to do well for themselves and for their greater communities. Thus, we prepare our students with the knowledge, skills and life-habits that will enable them to succeed, and to live lives of continuous personal growth and service to others. These outcomes are achieved through a commitment, by the entire AU community, to teaching and research, the pursuit of scientific and technical expertise, artistic creativity, and humanistic learning.

In reviewing applications, the Committee on Admissions considers the following factors most important:

- Rigor of high school or preparatory curriculum
- Grades
- Standardized test results, including the ACT or the SAT
- Extracurricular involvement
- Letters of recommendation
- Essay
- Interview/demonstrated interest

Individualized attention is given to every applicant.

International Student Policies and Procedures

Alfred University welcomes applications from qualified international students. The procedures listed below are necessarily strict in order to protect the University's visa-granting privileges. All international students (degree candidates and special students) must conform to the procedures and deadlines.

An international student wishing to matriculate must submit:

- A completed International Student Application Form by:
  Fall Semester - May 1
  Spring Semester - October 15
- Original or certified copies of all secondary transcripts showing proof of graduation and a certified English translation of those record
- A letter of recommendation from your instructor, teacher, school counselor, or principal.
- Art and Design applicants are required to submit a portfolio (see the first year or transfer section on portfolio submission).
- Proof of English Proficiency:

  Students whose native language is not English must show evidence of English proficiency. Please submit your official results for the Test of English as a Foreign Language (TOEFL) or International English Language Test System (IELTS). Scores must not be over two years old, TOEFL minimum score is 79, IELTS minimum score
  is 5.5.
- Standardized Tests:

  All undergraduate international applicants are required to submit official scores from the SAT, ACT if they have attended an American accredited institution, or national examinations scores if they have attended public/national schools.
- Required Essay for International Students

  Please provide a written statement that describes any personal experiences or circumstances that have affected your educational performance and/or personal development. Choose from the following essay topics:

  1. Write an article about yourself that would appear in your local newspaper. Be sure to include a headline.
  2. Briefly, why do you feel Alfred University is a good match for your academic and personal goals?
  3. Build a web-page on the Internet and give us the address. As part of the review process for your application, the Admissions Committee will explore your web site. This essay option must also include a paragraph (submitted with your application for admission) sharing your creative process as you designed the web page.
  4. Media and technology have had a significant impact on today's society. How have your ideals, experiences or goals been shaped by these influences? Write this in light of your relationships with others such as parents, friends, etc.

  Applicants to the School of Art and Design: Please respond to the following question in addition to OR in place of the above essay choices:

Over the past several years, how has your art transformed you and how have your artistic motivations and inspirations changed?

- Evidence of Financial Support

  The Department of Homeland Security requires Alfred University to verify that a student planning to study in the United States on an F-1 or J-1 visa provide financial evidence documenting sufficient funds for their student careers. To verify evidence of financial support, please submit the following:

  1. Alfred University Financial Statement with an official stamp from a notary or bank. This form must be completed by the student's sponsor.
  2. An official letter from your sponsor's bank indicating sufficient funds (translated into English) or an official award from your government or other sponsoring organization indicating the terms of support.

- Upon acceptance submit your $300 (non-refundable) enrollment deposit by:

  June 20 - Fall Semester
  November 20 - Spring Semester

  After the enrollment deposit is received, Alfred University will prepare an I-20 to be sent to your mailing address listed on the application or digitally if permitted by federal mandate. An I-20 is required to apply for a student visa at the nearest U.S. Embassy or Consulate in your home country. Once the I-20 is received the student is expected to pay the SEVIS fee and proceed with their embassy/consulate F1 visa application.

Transfer Students:

A student who has either studied at a post secondary institution outside of the US, inside the US, language school or center, or attended an accredited digital university. Note: If you have previously applied to Alfred University for transfer and been accepted, but have not officially deferred using a deferral request form and paying the deposit, your application will no longer be valid and you must reapply with the most recent and up-to-date documents.

Your application must contain the following and adhere to the below deadlines:

- A completed International Student Application Form by:

Fall Semester - June 15

Spring Semester - November 15

- Proof of English Proficiency:

Students whose native language is not English must show evidence of English proficiency. Please submit your official results for the Test of English as a Foreign Language (TOEFL) or International English Language Test System (IELTS). Scores must not be over two years old, TOEFL minimum score is 79, IELTS minimum score is 5.5.

- Original or certified copies of all Post-Secondary studies transcripts, certificates, and/or diplomas.
- A certified English translation of those records

- Official evaluation of those classes by either the World Evaluation Services organization or Education Evaluation International

International students transferring to Alfred University from another U.S. college or university must verify that they are in status. Please have your current International Student Advisor or Designated School Official complete an Alfred University Transfer Form and fax it to 607-871-2198.

Students who have completed any post-secondary studies must also submit:

- Original or certified copies of all Post-Secondary studies
- A certified English translation of those records
- Official evaluation of those classes by either the World Evaluation Services organization or Education Evaluation International
- Please provide a written statement that describes any personal experiences or circumstances that have affected your educational performance and/or personal development. Choose from the following essay topics:
  1. Write an article about yourself that would appear in your local newspaper. Be sure to include a headline.
  2. Briefly, why do you feel Alfred University is a good match for your academic and personal goals?
  3. Build a web-page on the Internet and give us the address. As part of the review process for your application, the Admissions Committee will explore your web site. This essay option must also include a paragraph (submitted with your application for admission) sharing your creative process as you designed the web page.
  4. Media and technology have had a significant impact on today's society. How have your ideals, experiences or goals been shaped by these influences? Write this in light of your relationships with others such as parents, friends, etc.

  Applicants to the School of Art and Design: Please respond to the following question in addition to OR in place of the above essay choices:

  Over the past several years, how has your art transformed you and how have your artistic motivations and inspirations changed?
- Evidence of Financial Support

  The Department of Homeland Security requires Alfred University to verify that a student planning to study in the United States on an F-1 or J-1 visa provide financial evidence documenting sufficient funds for their student careers. To verify evidence of financial support, please submit the following:

  1. Alfred University Financial Statement with an official stamp from a notary or bank. This form must be completed by the student's sponsor.
  2. An official letter from your sponsor's bank indicating sufficient funds (translated into English) or an official award from your government or other sponsoring organization indicating the terms of support.
- Upon acceptance submit your $300 (non-refundable) enrollment deposit by:

  June 20 - Fall Semester
  November 20 - Spring Semester

  After the enrollment deposit is received, Alfred University will prepare an I-20 to be sent to your mailing address listed on the application or digitally if permitted by

federal mandate. An I-20 is required to apply for a student visa at the nearest U.S. Embassy or Consulate in your home country. Once the I-20 is received the student is expected to pay the SEVIS fee and proceed with their embassy/consulate F1 visa application.

All international students are required to complete health and immunization forms as well as have valid insurance, these records must be received by our Health and Wellness Center prior to orientation or the student will not be able to register for classes and could be automatically deferred.

All official transcripts for transfer students must be mailed or submitted to the Office of the Registrar within the first semester of classes. If these documents are not received prior to the second semester of attendance registration will be automatically on hold and a student may have to temporarily withdraw.

If you experience any issue uploading one of the required documents please scan and send to International Office of Admissions or fax it to 607-871-2198 ATTN: International Office of Admissions. Note that shared files will not be accepted; the file must be an image, document, pdf file, or scan.

Readmission

A student whose study at Alfred University has been interrupted through voluntary or involuntary withdrawal from the University and who wishes to return must:

- Complete the Application for Readmission by August 1 for fall enrollment or December 1 for spring enrollment
- Submit a brief statement indicating why you wish to return to AU

Please make arrangements for the following materials to be sent directly to the Admissions Office by August 1 for fall enrollment or December 1 for spring enrollment:

- Official transcripts of college work taken at other institutions since attending AU (if applicable); Art and Design students must submit an updated portfolio consisting of 15-20 examples of recent work
- A readmission form from the Office of Student Affairs (contact Student Affairs at 607-871-2132 to have the form sent to the Admissions Office on your behalf)
- A readmission clearance form from the Student Service Center (contact the Student Service Center at 607-871-2123 to have the form sent to the Admissions Office on your behalf)
- At least one letter of recommendation from an employer (if employed since leaving AU) or from a faculty member (can be an AU faculty member or a faculty member from an institution attended while not enrolled at AU)
- For HEOP/EOP students only, a readmission recommendation from the Director of Opportunity Programs
  Please note: Before reaching a readmission decision, the Admissions Office will request a statement of support from the Dean of the College or School to which you are reapplying.

Additionally, if you are seeking financial aid, you will need to file the FAFSA (Free Application for Federal Student Aid) by the deadline listed above.

Involuntary Withdrawal of Acceptance

Alfred University reserves the right to withdraw acceptance of any prospective student prior to matriculation who engages in or has engaged in any activities, academic, social or financial, that are considered to be violations of accepted standards of conduct. This includes, but is not limited to, any penal laws.

Special Programs

Opportunity programs enable students whose economic and educational circumstances have placed limitations on their opportunities to further their education. To qualify for admission, students must be New York State residents, demonstrate the potential to succeed academically and socially, and demonstrate financial need as dictated by New York State guidelines.

Opportunity Programs provide support services, including tutoring and regular academic, personal, financial and career counseling to students throughout their enrollment at Alfred University.

Students accepted into the Opportunity Programs at Alfred University are required to participate in a Pre- First Year Summer Program. This program is designed to assist students in gaining an understanding of the demands and challenges that come with college enrollment and introduce them to the University campus and its surrounding communities.

The Summer Program includes courses in reading, writing, mathematics, introduction to sociology, computer literacy, and student success strategies. Instruction is provided in these areas to enhance proficiency in the basic skills necessary to be successful in college. HEOP (Higher Education Opportunity Program) is a partnership between Alfred University and the New York State Education Department and is intended for private colleges and universities.

EOP is a sister program for public institutions within the SUNY system. Alfred University has both programs because of our affiliation with SUNY.

Non-Degree (Special) Students

Individuals who wish to attend Alfred University as special students should contact the Student Service Center about course registration. Non-degree students need not apply to the Admissions Office. Since these students are seeking educational enrichment at Alfred University rather than a college degree, they are not eligible to receive financial aid.

Reserve Officers Training Corps (ROTC)

Alfred University students may enroll in the Army ROTC program in cooperation with the Seneca Battalion at St. Bonaventure University. This program leads to a commission as a second lieutenant in either the active Army, U.S. Army Reserve, or the U.S. Army National Guard.

The program is structured in two separate phases: a basic course for first year students and sophomores and an advanced course for juniors and seniors. With the exception of

ROTC scholarship recipients, students may enroll in the basic course without incurring any military obligation.

Admission of Veterans and Service Personnel

Alfred University values service to our country; service personnel are encouraged to apply for admission by contacting the Office of Admissions for further information.

Transfer Requirements

Applicants who are attending or have attended a junior or senior institution will be considered for admission if they meet the following criteria:

- Completed/attempted credit hours at an accredited college or university.
- Achieved a cumulative GPA of at least 2.5 on a 4.0 scale.
- Demonstrated good social standing at the previous institution.

The applicant's most recent academic performance is the primary consideration in transfer application review. Transfer candidates with GPAs below 2.5 but above 2.0 may be considered for admission, however, a personal interview with an admissions counselor is recommended and a specific essay is required.

The essay should discuss why the student's academic performance has been inconsistent with ability and why the student expects to achieve greater success at Alfred University. Additional faculty recommendations are also encouraged.

Transfer applicants should submit the following credentials:

- Application for transfer admission. The deadline for the fall semester is July 1 and the spring is December 1.
- Official transcripts from all colleges and universities previously attended.
- An official high school transcript.
- At least one letter of recommendation from a faculty member at the institution from which the student is transferring. If a faculty recommendation cannot be obtained, recommendations may also be submitted by professional members of the student's community who are not relatives and who can serve as valid references.
- Essay.
- School of Art and Design applicants please refer to the School of Art and Design Portfolio Requirements section in the first year Applicant Procedures.
- International transfer applicants should refer to the International Student Policies and Procedures.

Final acceptance is contingent upon the student successfully completing his/her current academic program and paying the required $300 deposit.

Transfer Art Applicants

Please refer to the School of Art and Design Portfolio Requirements section in the first year Applicant Procedures for specific portfolio requirements.

Transfer of Credits

It is Alfred University policy to provide transfer students with the greatest possible recognition of their previous college work while maintaining the integrity of its own academic programs. . Please note the maximum number of semester credit hours transferable toward any Alfred University degree program from all sources combined is 75. See the Academics section of the catalog for the University's detailed policy on transfer of credit.

Tuition, Expenses, Financial Aid

Tuition, Room and Board 2021-2022

Tuition*:

Alfred University is a private institution. However, some of our academic programs receive support from New York State resulting in individual programs with different tuition structures. Stated below is Alfred University's tuition structure by individual programs, and where applicable, by NY State residency status, for the 2021-2022 academic year.

Liberal Arts & Sciences and Business	$35,076
Mechanical, Renewable Energy, and Undecided Engineering	$35,076
Art and Design, Biomaterials Engineering, Ceramic Engineering, Glass Engineering Science, and Materials Science and Engineering	
New York State Residents	$20,450
Non-NY State Residents	$35,076
Student Service Fee	$1,200 per year
Average Room and Meal Plan*** (on campus)**	$12,924

* Tuition rates are subject to annual increases.
** Room cost used above is $6,498 for double occupancy. A limited number of single rooms are also available at $7,164 per year. These rates are subject to annual increases.
*** Meal Plan cost used above is $6,554 for a GOLD Plan (Ten meals per week in Ade Hall plus additional meal options on campus.) There are flexible meal plan options to choose from. Rates are subject to annual increases.

The above figures do not include costs for books and supplies. The rates listed apply only to the 2021-2022 academic year. Rates for future years are subject to increases.

The tuition and fees provide for academic instruction, University services and student activities. Services include use of the Campus Health Center, Career Development Center, Counseling and Wellness Center, Gibbs Fitness Center, and attendance at cultural programs. Activities include WALF (student radio station), Fiat Lux (student newspaper), Kanakadea (student yearbook), all student organizations, and some dances and concerts. Services also include use of all technology and library resources available to the campus population.

Room and board charges are only applicable when school is in session. Residence halls are closed and campus food service is not available for the scheduled vacation periods during the academic year. Students are responsible for their own linen service and telephone. All University charges are subject to change without notice.

Other Fees & Expenses

The $50 application fee has been discussed as part of the admissions procedure. The $300 acceptance deposit required of all students matriculating as degree candidates is non-refundable to those who do not attend the University.

For those who attend, $200 is held as a deposit as long as the student is enrolled. The remaining $100 is credited against the University tuition for the first semester. The $200 is returned, less any unpaid charges, after graduation or following the student's formal withdrawal, if done according to the official procedures. Students who do not notify the University before the semester begins that they will not be returning, forfeit their advance deposit.

Undergraduate students registered for twelve to twenty credit hours inclusive, are considered full-time students for billing purposes. Students who are registered for credits in excess of eighteen (twenty for engineers) are billed at a part-time instruction rate for the extra credits. The overload tuition rate is 1.5 times the normal tuition rate per credit. There are a few courses exempt from overload charges, such as select music or theatre performance courses that might be of interest to some students. All students registered for less than 12 credits are billed at a part-time instruction rate. Part-time tuition rates (<12 credits per semester) for 2021-22 are charged per credit hour and there is a part-time student service fee.

All registered students are expected to carry health insurance. Proof of student health insurance must be provided, prior to their arrival on campus, by all international students and all students that are participating in an intercollegiate sports team. The University does offer a Student Health Insurance Plan through a private carrier for international students only. The yearly coverage runs from August 2020 through August 2021 and the premium is subject to annual change.

All students with motor vehicles must register with the Director of Safety and obtain a parking permit. Parking Registration may be paid on-line or through the student account.

Additional charges are added to those students registered in courses requiring special materials (e.g. studio art courses, lab equipment, etc.) or individual instruction (e.g. private music lessons, equestrian fees, etc.). These charges will vary and are projected to be from $15 to $300 per credit hour or $5 to $500 per course. Private music lesson fees are projected to be $300 per credit hour, while Equestrian fees are projected to be $125 to $250 per course. Course associated fees (except for private music lessons) are refunded on the same percentage schedule as tuition. Refunds are not given for private music lessons after the second lesson.

Students who sign a housing contract for the academic year and break the contract by moving off-campus are responsible for a contract cancellation fee as specified by the housing/dining contract. Students who sign a housing contract for the academic year and break the contract by not attending Alfred University, or by withdrawing from

the University are not responsible for a contract cancellation fee as specified by the housing/dining contract.

If a student with a signed contract withdraws from the University prior to the start of the semester, no breakage fee is assessed. If the withdrawal is after the semester begins, the fee is a percentage of the room rent prorated based on the point of withdrawal within the semester.

For continuing students, a $500 housing contract cancellation fee is charged for moving off-campus after June 1st or $500 plus a prorated amount of the room rent after the semester begins.

Students who withdraw or take a leave of absence after the semester begins or otherwise drop the board plan will be charged $100 plus a prorated amount of the balance of the board payment, or the balance of the board payment; whichever is less. The prorated amount is based on the number of calendar weeks of the semester that have elapsed. Board contract cancellation fees at any other time are the same as those stated immediately above.

In addition to actual University charges, the Financial Aid Office uses the following educational cost estimates in determining need-based awards. These are average figures and will vary depending on individual preferences and personal circumstances. The estimated cost of textbook and supplies is $1,300 per year. Off-campus room and board costs are estimated at $12,924 per person per year. Personal expenses and transportation costs related to college attendance will vary according to lifestyle and distance from campus. Resident students should plan for about $2,100 in travel and personal expenses. Commuter students should estimate about $3,850 in travel and personal expenses.

Billing and Payments

Statements covering all charges for the semester are available through the university web-based e-Commerce system in July and must be paid by August 15th. Statements covering charges for the second semester are available during December and must be paid by January 15th. Statements are issued on a regular basis for those students that have new charges or a balance outstanding. There is a $35.00 fee for late registration changes. Past due accounts will be charged a late fee at the rate of 18% per annum on the unpaid balance. The University reserves the right to charge a flat fee of $75 if an account balance is not cleared by the due date of a bill.

Students should access the CASHNet billing system through their AU Banner Web student access portal. Parents or other users can log on to this secure site using their own login ID and password as soon as the student gives them authorization to do so. Once a parent or other authorized user has their own separate access, they will receive notification when a bill is created and uploaded to the CASHNet site. They can also use the site to make payments through a checking or savings account, verify that the account is paid in full, and review activity on a student account. The website is secure and certified as PCI compliant.

Refunds for overpayments on accounts are issued after financial aid is disbursed, after the class drop period has ended – typically the end of the second week of classes each semester. A small amount may be advanced at the beginning of a term to assist with the purchase of books and other supplies.

Refunds for full-time undergraduate students during the regular academic year are prorated based on the point of withdrawal within the semester.

It is important that the student formally withdraws from the University since refunds are determined by the date of receipt of the withdrawal notice. Formal withdrawal starts at the Student Affairs Office in Carnegie Hall. New students who withdraw during their first semester at Alfred may apply their non-refundable acceptance deposit against any charges accrued for tuition, room, or board.

Students are required to meet all financial obligations to the University when due. They will not be allowed to register for the following semester if there is a significant balance outstanding on their account. Students will not be allowed to receive a diploma or transcripts if they are delinquent in meeting financial obligations due to the University or any University organization.

All students are required to sign a statement each semester certifying their understanding that if the university does use a collection agency or take legal action for any account balance due, they will be liable for and shall pay all costs and expenses incurred by Alfred University, including reasonable attorney's fees and/or collection fees (which may be based on a percentage at a maximum of 33.3% of the debt) resulting from the referral.

Treatment of Federal Title IV Aid When a Student Withdraws

The law specifies how Alfred University must determine the amount of Title IV program assistance that you earn if you withdraw from school. The Title IV programs that are covered by this law are: Federal Pell Grants, Iraq and Afghanistan Service Grants, TEACH Grants, Stafford (Federal Direct) Loans, PLUS loans and Federal Supplemental Educational Opportunity Grants (FSEOGs).

When you withdraw during the semester, the amount of Title IV program assistance that you have earned up to that point is determined by a specific formula. If you received (or Alfred University or parents received on your behalf) assistance less than the amount that you earned, you may be able to receive those additional funds. If you received more assistance than you earned, the excess funds must be returned by the school and/or you. Title IV funds are returned to the programs from which they originated, in the following order, up to the net amount disbursed from each source:

1. Unsubsidized Direct Stafford loans (other than PLUS loans)
2. Subsidized Direct Stafford loans
3. Federal PLUS loans
4. Direct PLUS loans
5. Federal Pell Grants for which a return is required
6. Federal Supplemental Education Opportunity Grants (FSEOG) for which a return is required
7. Federal TEACH Grants for which a return is required
8. Iraq and Afghanistan Service Grants for which a return is required

The amount of assistance that you have earned is determined on a pro rata basis. For example, if you completed 30% of a semester or period of enrollment, you earn 30% of the assistance you were originally scheduled to receive. Once you have completed

more than 60% of the semester or period of enrollment, you earn all the assistance that you were scheduled to receive for that period.

If you did not receive all of the funds that you earned, you may be due a Post-withdrawal disbursement. If your Post-withdrawal disbursement includes loan funds, Alfred University must get your permission before it can disburse them. You may choose to decline some or all of the loan funds so that you don't incur additional debt. Alfred University may automatically use all or a portion of your Post-withdrawal disbursement of grant funds for tuition, fees, and room and board charges (as contracted with the school). Alfred University needs your permission to use the Post-withdrawal grant disbursement for all other school charges. If you do not give your permission, you will be offered the funds. However, it may be in your best interest to allow Alfred University to keep the funds to reduce your debt to Alfred University.

There may be some Title IV funds that you were scheduled to receive that cannot be disbursed to you once you withdraw because of other eligibility requirements.

For example, if you are a first-time, first-year undergraduate student and you have not completed the first 30 days of your program before you withdraw, you will not receive any Direct Loan funds that you would have received had you remained enrolled past the 30th day.

If you receive (or Alfred University or parent receive on your behalf) excess Title IV program funds that must be returned, Alfred University must return a portion of the excess equal to the lesser of:

1. your institutional charges multiplied by the unearned percentage of your funds, or
2. the entire amount of excess funds. Alfred University must return this amount even if it didn't keep this amount of your Title IV program funds. If Alfred University is not required to return all of the excess funds, you must return the remaining amount.

Any loan funds that you must return, you (or your parent for a PLUS Loan) repay in accordance with the terms of the promissory note. That is, you make scheduled payments to the holder of the loan over a period of time.

Any amount of unearned grant funds that you must return is called an overpayment. The maximum amount of a grant overpayment that you must repay is half of the grant funds you received or were scheduled to receive. You do not have to repay a grant overpayment if the original amount of the overpayment is $50 or less. You must make arrangements with Alfred University or the Department of Education to return the unearned grant funds.

The requirements for Title IV program funds when you withdraw are separate from Alfred University's refund policy. Therefore, you may still owe funds to Alfred University to cover unpaid institutional charges. Alfred University may also charge you for any Title IV program funds that the school was required to return.

If you have questions about your Title IV program funds, you can contact the Alfred University Office of Student Financial Aid (607-871-2150) or call the Federal Student Aid information Center at 1-800-4-FEDAID (1-800-433-3243). TTY users may call 1-800-730-8913. Information is also available on Student Aid website.

Treatment of Alfred University Aid When a Student Withdraws

When a student withdraws, Alfred University financial aid funds are prorated in the same manner as tuition charges under the University's refund policy. For example, if a student is charged 40% of tuition at the time of withdrawal, the student is eligible for 40% of University aid awarded and 60% of the University aid is returned to the appropriate aid account. University aid is returned to the sources from which they originated, in the following order, up to the net amount disbursed from each source:

1. Loans
2. Grants
3. Scholarship

Once all withdrawal calculations and processes are completed, Alfred University will send students a revised Student Financial Aid Award Notice which shows the final amount for each University aid program.

Appeals/Charges and Refunds

Refunds based on excess credits are made payable to the student and issued automatically after the end of the add/drop period if all payments and financial aid are finalized. Refunds based on Parent Plus Loans are automatically refunded to the parent unless the parent designates the student as the recipient of any excess payment on the loan application or in writing to the Student Accounts Office. Any remaining credit balance is then refunded to the student.

Original appeals regarding charges or refunds should be made to the office initiating the action. Further appeals must be made to the Vice President for Business and Finance, Carnegie Hall.

Note: For Graduate School, see the Graduate Catalog. For Summer School, see the Summer Programs web page.

Financial Aid

Entering First Years

Applicants are requested to complete the Free Application for Federal Student Aid (FAFSA) and the Alfred University Financial Aid Application. Detailed information on financial aid programs, application requirements and procedures, and University aid policy is published annually in the Financial Aid Information and Application brochure. This document is provided to all students upon receipt of the application for admission and is available upon request from the Office of Student Financial Aid. This financial aid information is also available on the website. The application priority deadline for first year students is January 15th for the fall semester and December 1st for the spring semester.

Transfer Students

Entering transfer students should observe the same application process as entering first years. The transfer application priority deadline is May 15th for the fall semester and December 1st for the spring semester.

Returning Students

Returning students should observe the same application process as entering first years. Students must apply each year to receive funds. The returning student application priority deadline is January 15th.

Financial Aid Satisfactory Academic Progress Policy for Undergraduate Degree Programs

In compliance with federal and New York State regulations and University policies, Alfred University has established satisfactory academic progress standards for financial aid. Students must meet these standards to be eligible to receive federal, State, or University financial aid payments.

1. **Satisfactory Academic Progress (SAP) Requirements for Federal and University Financial Aid Programs**

   To be eligible to receive financial assistance under any federal or University scholarship, grant, loan, or work program, students must demonstrate minimum qualitative and quantitative academic measurement standards. The qualitative and quantitative standards used to measure satisfactory academic progress are cumulative and encompass all enrollment periods, including periods of enrollment during which the student did not receive federal or University aid.

   - **Qualitative Measurement**

     The qualitative measurement standard is expressed as a minimum cumulative grade point average (CUM/GPA) which must be demonstrated prior to each semester of enrollment. The following chart illustrates the minimum CUM/GPA requirement:

Semester of Attendance	Minimum CUM/GPA
1	0
2	1.0
3	1.5
4	1.75
5+	2.00

   - **Quantitative Measurement**

     The quantitative measurement standard has two concepts: a maximum time frame in which the student is expected to finish a degree program; and a comparison of the number of credit hours the student attempted with the number of credit hours the student successfully completed to determine whether the student is progressing at a rate which will allow the student to finish the program within the maximum time frame. This is referred to as the minimum completion ratio.

- **Maximum Time Frame**

  The maximum time frame in which the student is expected to finish a baccalaureate degree program is defined as 150% of the published length of the program, according to the Alfred University Catalog, measured in attempted credit hours. For example, the College of Liberal Arts and Sciences requires 124 credit hours to complete a degree. Therefore, the maximum time frame for which a liberal arts student may be eligible for aid is the period during which the student attempts 186 credit hours (124 X 1.5 = 186).
- **Minimum Completion Ratio**

  The percentage of attempted credit hours a student must successfully complete to demonstrate SAP is the minimum completion ratio. For all undergraduate degree programs at Alfred University, this percentage is 67%. The minimum completion ratio is determined by dividing the program credit hours required for graduation by the maximum time frame credit hours.

  The application of the completion ratio is cumulative. Therefore, a student must successfully complete 67% of all credit hours attempted to demonstrate SAP for federal and University aid. For example, if a student attempted 60 credit hours during the first four semesters of enrollment, this student would need to demonstrate at least 40 successfully completed credit hours to satisfy the SAP minimum completion ratio requirement (60 X .67 = 40.2).
- **Evaluation Periods and Frequency of Measurement**

  The review of a student's SAP is done at the end of each semester, after final grades are posted by the Registrar. All students are reviewed regardless of the student's enrollment status or number of semesters attended during the academic year.
- **Cumulative Grade Point Average (CUM/GPA)**

  The CUM/GPA is the CUM/GPA as determined and recorded by the University Registrar on the student's official Alfred University academic record. Grades earned at other institutions for transfer credits are not considered to determine the student's Alfred University CUM/GPA or SAP CUM/GPA requirements.
- **Attempted Credit Hours**

  For purposes of SAP, a credit hour is considered attempted unless the student's academic record demonstrates one of the following grade designations for the course credits: CH, AU, or EX. Classes/courses which carry a designation of 0 credit hours are not considered attempted credits. Transfer credits are also considered attempted credits. See Transfer Credit Hours below.
- **Earned Credit Hours**

  A credit is considered successfully completed and earned if the student's academic record demonstrates a P, or A through D grade for that credit hour. Classes/courses which carry a designation of 0 credit hours are not considered earned credits. Transfer credits are also considered earned credits. See Transfer Credit Hours below.
- **Transfer Credit Hours**

  Credits transferred into Alfred University are considered as both attempted credit hours and earned credit hours for the SAP quantitative measurement standards, maximum time frame and minimum completion ratio.

- **Failure to Demonstrate Satisfactory Academic Progress Loss of Aid Eligibility**

  Students who fail to meet one or more of the SAP standards become ineligible to receive further Federal Title IV and University aid payments at Alfred University. The first time this occurs, the student will be placed on Financial Aid WARNING for one semester. This allows the student to be considered for Federal and University aid sources for this one semester. During this Financial Aid WARNING semester the student is expected to achieve SAP compliance as identified in their WARNING notice. If they do not achieve the necessary SAP compliance, at the end of the one-semester WARNING, they will have to Right to Appeal their aid ineligibility status as addressed in this policy. Note: this WARNING does not apply to NYS aid programs.
- **Right to Appeal**

  Students determined to be ineligible for Federal Title IV and University aid programs have the right to appeal. Appeals must represent extenuating circumstances which occurred to cause the student to fail achieving SAP. Appeals must be made in writing (a letter or email), authored by the student, presented to the director of financial aid within 15 days of the date on the letter notifying the student of the lack of SAP, and supported by appropriate documentation. Appeal decisions are made by the director of financial aid.

  All appeals must include an academic plan which, if followed, will ensure the student is able to meet SAP standards within one or two semesters of additional attendance. Academic plans must be approved by the student's college/school dean and identify specific actions and academic performance criteria the student will satisfy during and at the end of each semester in the academic plan.

  Students are provided specific, detailed guidance for appeal letters, allowable appeal circumstances, and academic plans when notified of SAP noncompliance.
- **Financial Aid Probation**

  If a student's appeal is approved, the student will be placed on financial aid probation for the next semester attended. Students may receive aid payment during probation. At the end of the probation semester, the student must satisfy all SAP standards and/or their academic plan requirements to be eligible for continued aid payments the following semester.

2. **Reinstatement of Aid Eligibility**

   Students who do not satisfy the SAP requirements may reinstate their aid eligibility by correcting SAP deficiencies without the benefit of Federal or University aid or submitting a successful appeal and satisfying SAP standards after a probation period.
3. **New York State Progress Standards**

   New York State has established academic progress standards for the Tuition Assistance Program (TAP), State scholarships, and other State aid programs. For New York State, the student is subject to three progress standards: program pursuit, satisfactory academic progress, and a C average requirement.

   - **Program Pursuit**

Program pursuit is defined as receiving a passing or failing grade, in a certain percentage of a full-time course load, in each semester for which a State aid award is received to be eligible for the next semester's payment. The percentage increases from 50% of the minimum full time course load (12 credit hours) in each semester of study in the first year for which an award is received, to 75% of the minimum full-time course load in each semester of study in the second year for which an award is received, to 100% of the minimum full-time course load in each semester thereafter.

The following chart illustrates the program pursuit requirements for New York State aid. The chart defines the number of credit hours a student must complete during the semester for which a State aid payment was received according to the student's cumulative number of State aid payments received.

Number of State Aid Payments Received	Minimum Credit Hours Completed
1	6
2	6
3	9
4	9
5+	12

For program pursuit, a credit hour is considered completed if the student received an A through F, Z, or P grade.

- **Satisfactory Academic Progress (SAP)**

  The New York State satisfactory academic progress measurement defines the minimum number of earned credits and the minimum CUM/GPA which must be met for each term of study in which a State award is received. The following chart illustrates these standards. A credit is considered successfully completed and earned if the student's academic record demonstrates a P, or A through D grade for that credit hour.

  Before being certified for this payment number:

1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th

  A student must have earned at least this many credits:

0	6	15	27	39	51	66	81	96	111

  With this Minimum GPA

0	1.5	1.8	1.8	2.0	2.0	2.0	2.0	2.0	2.0

  * Only students enrolled in a five-year baccalaureate program or an approved Education Opportunity Program may receive a fifth academic year of payment.

- **C Average Requirement**

  Students who have received the equivalent of four semesters of New York State-funded student financial aid payments must have a minimum CUM/GPA of 2.0 to be eligible for subsequent State aid payments.

- **Evaluation Periods and Frequency of Measurement**

  New York State SAP and program pursuit standards are measured at the end of each semester for which the student received State aid. The C average

requirement must be met for all semesters after receiving four semesters or more of State aid payments.

- **Reinstatement of New York State Aid**

  Students who have lost good academic standing and payment eligibility under the New York State SAP, program pursuit, or C average requirements may regain eligibility in one of the following ways:

  a. Make up the academic deficiencies without the benefit of New York State aid.
  b. Be readmitted to the University after an absence of at least one calendar year. This provision of the State aid regulations does not apply to the C average requirement.
  c. Transfer to another institution where the student must meet that institution's admission requirements.
  d. Appeal for a waiver of the SAP, program pursuit, or C average requirement based on extenuating circumstances. The appeal procedures are provided with the notification that the student does not meet good academic standing for NY State aid.

  New York State aid regulations state that a student may receive an extenuating circumstance waiver only once for the SAP and program pursuit requirements. An extenuating circumstance waiver of the C average requirement may be granted more than once. Financial aid probation is not permitted for New York State aid programs.

Available Financial Aid Programs

Follow these links for information on AU's Scholarships, Grants, Employment and Other Aid Programs.

Student Life

Alcohol and Other Drug Education

The mission of the Alcohol and Other Drug Education Program is to provide information, activities, services and support to the students, faculty, staff, and administration of Alfred University, to promote substance abuse resistance and to foster healthy lifestyle choices. This education and prevention program features:

- Fun, alcohol-free social activities
- Special events during Alcohol Awareness Week, Spring Break, Holidays, Orientation, and Graduation
- Social Norms Campaigns
- Presentations in residence halls and classrooms
- A resource center for personal and professional use
- Data collection for AOD use
- Policy review and recommendations
- Referrals for students abusing alcohol and other drugs

Alumni Association

The Alfred University Alumni Association dates back to 1884 when a group of enthusiastic former students established an organization to “create and maintain activities for the support and development of the University.”

The Alumni Association is led by the Alumni Council whose members are selected from active alumni volunteers. In 2010, the Council updated the Alumni Association’s Constitution and its mission: “The Alfred University Alumni Association actively supports and facilitates the strongest possible sense of community among Alfred University’s administration, faculty, student body and alumni.” The Alumni Council operates under the direction of an elected President and with the support of the Executive Director for University Advancement.

Alumni are encouraged to attend virtual and regional events, and to also return to campus for special events, such as Hall of Fame Inductions, Homecoming and Reunion. In addition to being reunited with classmates and other AU alumni, these events often provide networking opportunities, introductions to current students and the chance to receive campus updates from Alfred University's administration and staff.

The Alfred Magazine, is offered on-line and mailed to engaged and active alumni. It offers information about events, along with campus news, class notes and alumni profiles. The University also communicates electronically with its alumni through E-News and social media.

Alfred University's online community is a vital link for communication among classmates and between the University and alumni. Alumni may register on-line for regional and campus events. The online Alfred Community enhances opportunities to stay in touch by offering a permanent email address.

The Office of Alumni Engagement is located on campus in the University Advancement Office at the Fasano House. Alumni and friends are encouraged to stop in when visiting

the Alfred area. Alumni may also stay in touch by calling 607-871-2144 or by email. Our staff is looking forward to assisting you with any Alfred University matters you may have.

Athletics

Athletics are an integral part of campus life. A wide-ranging program of intercollegiate competition, intramural sports, and recreational activities satisfies students' individual athletic aspirations.

Indoor Facilities

McLane Center is the hub of athletic activities housing the Terry S. Galanis Family Arena, our six lane swimming pool (Lebohner Pool), the Gibbs Fitness Center (with over 60 pieces of equipment designed to promote cardiovascular fitness as well as strength training equipment), the Gene Castrovillo Athletic Training Room, the Mena and Rick Hansinger Family Physical Rehabilitation Center and the Joyce Walton Strength and Conditioning Center which is restricted solely for student-athlete and athletic staff use.

The Joyce and Walton Family Center for Health and Wellness is a 33,000-square-foot addition to McLane Center which includes a 140-meter, raised indoor track; an all-purpose court suitable for basketball, volleyball, badminton, soccer and other open space games; and two locker rooms. It also features a multi-purpose room, three spinning bikes, stair steppers and rowing machines on the upper level.

Outdoor Facilities

Outdoor facilities include Yunevich Stadium (home of the Saxon football, lacrosse, and soccer teams) with a multipurpose artificial surface accommodating intercollegiate sports, intramural activities and recreation; the Harrington Softball Park; six tennis courts; several basketball courts; a portable volleyball and basketball court and a pavilion. All are located near the residence halls.

The Daggett Equestrian Center, just minutes from campus, opened in Fall 2005 featuring indoor and outdoor arenas, 52 stalls, and classrooms. The Jericho Hill Fields site is the training site for men's and women's cross country teams. The football team occasionally practices on the grass, in season. Men's and women's rugby (club sport) also uses Jericho. In the winter, cross-country skiers use the trails. Downhill and additional cross country skiing areas are located a short distance from campus.

Intercollegiate Athletics

Alfred University sponsors intercollegiate athletics for women in basketball, soccer, cross country, swimming and diving, tennis, track and field, lacrosse, softball and volleyball. Men's intercollegiate sports include football, cross country, track and field, basketball, soccer, lacrosse, swimming and diving, and tennis. The equestrian, cheerleading and ski teams are varsity and coeducational. Alfred is a member of the National Collegiate Athletic Association, the Eastern College Athletic Conference and the highly competitive Empire 8 Conference, while skiing competes in United States Collegiate Ski and Snowboard Association (USCSA) and Equestrian in the Intercollegiate Horse Show Association (IHSA). The intercollegiate programs operate under the rules and regulations of NCAA Division III.

Intramurals and Club Sports

All indoor and outdoor facilities are available for AU’s intramural programs and for general student use. With a focus on participation in competitive physical play, the program is open to the entire University community (undergraduate and graduate students, faculty, and staff).

We offer intramurals which change year to year based on student interests. Past intramurals included: soccer, basketball, flag football and handball.

The University also offers club sports such as fencing, men's and women's rugby and ultimate Frisbee.

Campus Center

The 60,000 square foot Arthur and Lea Powell Campus Center built in 1994, features panoramic hillside views, a forum/movie theater, an "open air" food court, a night club, student organization offices, a radio station, the bike hub (bike rentals), meeting rooms, a formal Alumni Lounge, mail room, gaming space and student lounge. Resources found in Powell Campus Center are the Center for Student Involvement, Pamela Lavin Bernstein Center for Advising, Offices of Vice President of Student Affairs and the Dean of Student Wellbeing, the Institute for Cultural Unity and the University Barnes and Nobles Bookstore.

Robert R. McComsey Career Development Center

The CDC empowers students and alumni to find their professional purpose and meaningful work through informed decision-making, practical experience, and connection to the global community. Centralized professional services include the following:

- One-on-one meetings with a career counselor to discuss career related needs such as job or internship search, interviewing, career decision making, salary negotiation, and graduate school planning
- Document Review: resume, letters, personal statements, and application materials
- Assistance with applications for summer jobs, research, internships, full time positions, and graduate school
- Career Assessments: Myers-Briggs Type Indicator and Strong Interest Inventory
- Saxon JobLink – job search database and career management system
- Annual Career Fairs: On Campus Job Fair, Engineering Career Fair, Graduate School Fair, Spring Career Expo, and Social Impact Career Fair
- Expert-in-Residence program: allows students to connect with successful alumni and representatives from a variety of careers and industries
- Access to alumni networks in a wide range of fields and locations
- On-campus recruiting, interviewing and resume referral
- Frederick W. Gibbs Career Resource Library which houses career information, job and internship postings, and graduate school information
- Computer lab with Internet access and printer for student use

Conduct System

University students are expected to conform to high standards of behavior, both on and off campus. The University Student Life Policies exist to serve as a guide for each student and to ensure the proper atmosphere necessary for the academic and social life of each student. Students will be held accountable for their behavior that adversely affects the University community and/or the pursuit of its objectives, or violates state, local or federal law.

The Alfred University Student Conduct System is designed to hold students accountable for their behavior, to protect the University community and property, and to protect the rights of the members of that community to function in an environment conducive to academic and co-curricular pursuits. It is designed to confront individuals with the inappropriateness of their actions in a constructive and educational manner that will foster an understanding of the impact their behavior has had on individuals and the community (A detailed statement on the conduct system can be found on the Alfred University student web portal under “Student Conduct System”).

Annual Campus Safety and Fire Report

The Annual Campus Safety and Fire report is available to all members of the campus community and to the public. The report contains University policies related to campus safety including: University Office of Public Safety policies and procedures, policies concerning alcohol and drug use, crime awareness and prevention, the reporting of crimes, and sexual misconduct. The report also includes a three-year summary of statistics of crimes that are reported to have occurred on University property, in off-campus buildings owned or controlled by the University, and on public property within the Village of Alfred. A copy of this report can be obtained from the Student Affairs Office, the Admissions Office, the Human Resources Offices, or by accessing the University website.

Hazing Policy

Alfred University believes that any group or organization composed of students, faculty, staff and/or visitors has the responsibility to create an environment within which all activities are pursued in a sound and productive manner. Any group or organization which includes hazing as part of its activities creates a risk of hazardous conditions.

Alfred University defines hazing as “any activity or action which subtly, flagrantly, recklessly, or deliberately demeans, embarrasses, threatens, invites ridicule or draws inappropriate or negative attention to a member, affiliate, or group, and/or an attitude which implies one member/affiliate is superior to another or that membership in the group must be earned through personal services or meaningless activities. Furthermore, this definition includes any action which results in the impairment of academic performance or causes failure to properly fulfill obligations to University-sponsored groups and organizations.”

Alfred University unconditionally opposes any form of hazing. Any violation of this policy should be reported immediately to the Dean of Student Wellbeing. Any member or affiliate who is in violation of this policy is subject to suspension, expulsion, or other conduct proceeding, or, if the violator is a group or organization, recision of affiliation with Alfred University.

Furthermore, New York State defines hazing as follows: “A person is guilty of hazing in the first degree when, in the course of another person’s initiation into or affiliation with any organization, he intentionally or recklessly engages in conduct which creates a substantial risk of physical injury to such other person or a third person and thereby causes such injury.” (Penal Law S120.16) Hazing in the second degree (a violation) incorporates a nearly identical definition except that no actual injury to any person needs to be proven. (Penal Law, S120.17)

Extra-Curricular Activities and Events

More than seventy-five student-led organizations exist at Alfred University. Organizations offer students a chance to pursue special interests or discover a new one. They also assist in the development of leadership skills, goal setting, and budget management. Many of these organizations are mentioned in this section, but others exist and new groups are always being formed.

Contact the Center for Student Involvement at 607-871-2671 for a complete list of all student organizations.

Student Government

Participation in co-curricular activities benefits Alfred students in many ways. There is no better training for many professions than experience in student government. The present Student Senate has been in existence since 1976 and has been instrumental in initiating changes and improvements.

The Senate meets weekly. Each senator is elected by and represents a particular constituency – i.e., residence hall, campus organizations, or off-campus residents. The Senate president and vice-president are chosen by a campus-wide election.

Among the Senate’s major functions are raising and discussing issues of student concern, proposing constructive changes to promote student well-being, and distributing funds to other campus organizations. The Senate elects or recommends student representatives for University and college committees.

Entertainment Opportunities

Whether producing a major concert with national touring performing groups or displaying your own personal talent in front of a packed theater, there is a diverse range of ways to entertain or be entertained at Alfred.

- Student Activities Board – the main provider of entertainment including comedians, bands, and solo performers
- Alfredian Dramatists – a student group that provides various opportunities to perform throughout campus by singing, dancing and acting
- Performing Arts Division – Opportunities abound for co-curricular involvement in Orchestral, Vocal and Instrumental Music groups, Dance ensembles and Theatrical productions

Outdoor/Environment Opportunities

- Forest People – Alfred’s outdoor recreational club travels far and near for activities including repelling, rafting, hiking, and more

Media Organizations

- Fiat Lux – bi-weekly student newspaper
- AUTV – Student television station broadcasting announcements and occasional student-produced shows
- WALF – 24-hour campus radio station with an eclectic mix of music styles

Cultural Events

Several campus organizations sponsor appearances by visiting artists, speakers and groups. The Student Activities Board (SAB), and individual academic divisions invite lecturers and performing and visual artists to campus for residencies and one night appearances. Alfred University student groups sponsor a number of popular entertainers in the from coffeehouse performers and comedians, as well as concerts by well-known performers. The Fosdick-Nelson gallery exhibits sculpture, glass, ceramics, paintings, lithographs and photography. Student theater and dance productions, as well as performances by musical ensembles, occur at frequent intervals throughout the year.

The Institute for Cultural Unity is Alfred University's source of diversity education and multicultural programming. The Institute for Cultural Unity is a resource center that develops self-awareness and respect for others through the sharing of experiences and cultures. Led principally by students, the governing body of the Institute for Cultural Unity is comprised of the following student organizations and their leaders:

- Umoja (AU's Black Student Union)
- Poder Latino (AU's Hispanic Culture and Heritage Organization)
- Spectrum (AU's Lesbian, Gay, Bisexual, Transgender, Queer, Questioning, Intersex and Ally Serving Organization)
- Caribbean Student Association
- International Students and Scholars Organization
- Students Advocating for Gender Equality
- Newman Club (Catholic organization)

Multiculturalism

All of the clubs under the ALANA (African-, Latino-, Asian-, Native-American) umbrella strive to both educate the campus and provide social support for members.

- Poder Latino – Alfred's Latino support club sponsors several events including auctions for charity and talent shows for their members
- Umoja – AU's Black Student Union is best known for its Charity Basketball Game and Slam Poetry events
- International Students and Scholars Organization – Support and social events for International students
- Caribbean Student Association – Only two years old, but already sponsors incredible events such as an annual Fashion Show and a Beach Party
- Alfred Steppas – High energy performance created by rhythms of foot-stomping, hand-clapping and much, much more
- Spectrum – Support and social programming for our gay, lesbian, and bi-sexual community; supporters welcome

Major Weekends and Events

- Homecoming Weekend – Highlighted by a Saxon football game and great entertainment
- Hot Dog Day – Now a well-established tradition, Hot Dog Day is a combination of street carnival and springfest, highlighted by an ice cream social, chicken barbecue, craft sale, band party, parade, and many other amusements and festivities, all centering on the consumption of thousands of hot dogs. The funds raised by this community event are turned over to area charities
- Spring Family Weekend – Highlighted by the Alfred Honors Convocation, which recognizes academic excellence
- Large Act Concert – SAB's annual gymnasium concert has included Adam Sandler, Alanis Morissette, Bare Naked Ladies, Smashmouth, Vanessa Carlton, Black Eyed Peas, Gym Class Heroes, Everclear and OAR

Housing and Dining Services

Alfred University is a residential university. We believe that residence hall living is a key component of a student-centered educational experience in which academic learning is integrated with student development. Each student is personally accountable for maintaining a safe and secure environment in his or her residence hall that promotes a healthy standard of community living.

For these reasons, provisions are made to house all students on campus throughout their undergraduate years. Students are required to live on campus for six consecutive semesters. Once this residency requirement has been met, students are able to apply to live off-campus. To obtain approval to live off-campus, students must watch a presentation about living off-campus and pass a quiz on the content, complete an off-campus housing application, and receive permission to move off campus from the Dean of Student Wellbeing. Some students may be eligible or considered for an exemption if they are: married or a single parent, 23 years of age or older, commuting from their parent's primary home within 60 miles of campus, participating in a co-op or study abroad program, or in need of a medical exemption. For more information, contact the Residence Life office at 607-871-2186.

Meal Plans

All students who live on campus in residence halls are required to participate in a meal plan, except for seniors or residents of International House, Hillel, Language House, Honors House, Environmental House, and the Ford Street apartment complex. Our meal plan options are designed to give students maximum control of their meal management in relation to their lifestyle. Meal plans come with a combination of Ade Meals on a weekly basis (for Meal Plan Members Only), Saxon Swipes on a semester basis and Dining Dollars on a semester basis. First-year students have a choice of three meal plans; the King Alfred, Gold, and Purple Plans. Sophomores and Juniors have an additional option of the Black Knight Plan. Dining Dollars are used like cash at any dining location and at selected vending machines. Dining Dollars only come with the purchase of a meal plan, additional Dining Dollars are not for sale. Fall semester balances carry over to the spring semester only if a meal plan is purchased

for the spring semester. Dining Dollars are valid through Commencement day of each academic year. Meal plans are for individual student use only and are non-transferable.

Ade Dining Hall offers multiple entrees with unlimited seconds and vegetarian choices at every meal. Powell Cafe located on the top floor of the Powell Campus Center and MidKnight Express, located on the first floor of Ade Hall, offer one combo meal in exchange for one meal swipe, referred to as a Saxon Swipe.

Saxon Swipes are good for each semester only as they do not roll from one semester to the next. Saxon Swipes can be used for guests. For more information, please see the AU Fresh! Dining Services website or contact AU Fresh! at 607-871-2247.

Fiat Bux

Students can also purchase Fiat Bux, which are similar to dining dollars with more buying power. In addition to dining locations and vending, Fiat Bux can be used to make purchases in the Clay Store, the Design Store, and Barnes and Nobles Bookstore. To purchase Fiat Bux use the GET Mobile app and tap "Add Funds" to enter your credit card information (MC, Visa, AMEX and Discover) are accepted. You can invite family members to add Fiat Bux to your accounts from their homes.

Housing Options

With a broad spectrum of architectural and environmental styles available, choices range from traditional residence halls to suites and apartments. Single rooms are available to students on a limited basis.

Each living area selects its own quiet and courtesy hours as an extension of the all-campus quiet hours after the semester begins. Residence halls are coed by floor; i.e., a floor of men, a floor of women; or coed by suite – i.e., one suite of men may be located next to a suite of women; or coed by alternating rooms within corridor-style designated buildings for upper class students. All residence halls are non-smoking.

Housing Staff

Residence hall staff members live in each building and on each floor or section. Resident Directors (RDs) are full-time graduate students. The RD staff is responsible for the entire operation of the buildings. Each floor has a Resident Assistant (RA), an undergraduate student who has proven him/herself able to work well with people and their concerns.

The Director of Residence Life, Associate Director, and Assistant Directors are also available to help students acclimate to their new social and educational environment. The Office of Residence Life, located in Bartlett Hall, is an available resource for student housing concerns. Residence hall living includes increased, independent responsibilities and taking part in activities planned to promote community and learning.

Student Life

The Division of Student Affairs helps students meet their personal and academic goals within the caring residential environment at Alfred University. Staff members and programs encourage students to develop, explore and express themselves as individuals and as community members.

Outside the classroom, more than 80 student clubs and organizations offer a multitude of exciting activities for every interest. Concerts, theatre and dance events, comedy clubs and coffeehouses provide quality nightlife. Intercollegiate athletics involve one out of every five students; many students also participate in intramurals.

Our professional staff offers a full range of student development and learning opportunities – from career planning and counseling to health care, residence life and leadership education. As part of the transition into their first year at Alfred University, incoming students take part in a required orientation. They meet fellow students and faculty members and become acquainted with our historic campus and its facilities.

International Programs Office

The Alfred University International Programs Office assists international students with any issues or problems they may encounter while in the United States. They sponsor the International Student Orientation. International students are encouraged to share questions or concerns with fellow students, faculty members, their advisor, or any of the advisory staff that works with international students.

The International Programs Office is located in Perlman Hall and can be reached at 607-871-2269.

Opportunities in Theater, Music and Dance

Theatre, music and dance opportunities are plentiful at AU, either through involvement within the Performing Arts Division or through classes, concerts, and productions in our many student organizations and productions. All students, regardless of major, can enhance their academic pursuits through involvement in the performing arts, led by highly qualified faculty and motivated student directors, actors musicians and choreographers.

Theatre

- Act, stage manage, design and participate in many other ways in a wide range of faculty directed plays
- Write, produce, direct and perform in student productions
- Become a member of the active Alfredian Dramatists student club

Music

- Sing in the University Chorus or Chamber Singers
- Play in the Symphony Orchestra, Symphonic Band, or Jazz Band
- Join the AU Pep Band
- Form your own music groups, such as string quartets, brass ensembles and select vocal groups
- Learn to play the carillon, the Chinese Guzheng, piano, or any other instrument

Dance

- Perform in professional guest artist, faculty and student choreography

- Create and perform in alternative indoor and outdoor sites
- Choreograph and/or perform in Informal Dance Showings
- Collaborate with dynamic artists in a variety of art forms
- Participate in a variety of dynamic dance clubs

Performance Design and Technology

- Design sets, costumes, lighting, sound and props for all of the performing arts
- Collaborate and participate in technical aspects of theatre, dance and music productions

Parents Association

The Parents Association exists to promote and enhance opportunities for parents of Alfred University students to communicate, participate, and establish a sense of community with one another and with the faculty, staff and administrators of Alfred University. All parents of current students are automatically members of the Parents Association. A current parent serves as President of the Association. There are no dues, and all parents are welcome to participate in Association meetings.

As part of the Association, a small group of volunteers serve as the Parents Advisory Board. Their purpose is to provide feedback/suggestions related to AU Parents Programs and help determine future direction; to serve as a resource to prospective and current AU parents in terms of student academic life and life within the University community; to provide valuable input to the AU administration when a parent's “point of view” is needed; and to assist the Director of Parents Programs and the President of the Parents Association as needed in planning and development.

The University organizes two weekends a year for parents, one in the fall and one in the spring. These Family Weekends provide opportunities to visit with sons and daughters and to take part in campus activities.

Spiritual Life

The University is non-sectarian. In accordance with its century-and-a-half tradition, it extends a welcome to people of diverse ethnic and religious backgrounds. The University, Village, and surrounding area provide ample opportunities for students to find a religious community.

Religious communities in the Village of Alfred and beyond welcome student participation and many religious groups offer on-campus activities and programs specifically designed for University students.

You can additional details about services available on our Spiritual Life page.

Wellness Center

Counseling Services

Located in the north wing of the AU Wellness Center building, near the Saxon Inn, Counseling Services, a component of the Wellness Center and a part of the Student

Affairs Division, provides a comprehensive range of counseling, consultation, and educational programs to promote the personal development and success of students. Individual, couple, and group therapy sessions are provided by nationally certified and licensed staff. These are completely confidential in accordance with standards set by the American Counseling Association.

The counseling staff members provide crisis response and are on-call for emergencies when AU is in session. The Wellness Center offers all services at no cost to currently-enrolled undergraduate and graduate students. Appointments for psychiatric consultation are available for a small fee. Appointments for counseling or psychiatric consultation can be arranged by calling 607-871-2300 or by stopping by the office at 19 Park Street.

Health Services

Health Services is located in the south wing of the AU Wellness Center building at 19 Park Street. A team of practitioners provides care for non-emergency problems and preventive health concerns. Services include consultation and treatment for acute problems, laboratory work and specimen collection, gynecological exams, and referral for specialist and hospital services. Emergency care is available after hours through our public safety office and free transportation is provided by the village ambulance to local hospitals.

There is no charge to meet with a provider at Health Services. Minimal charges are made for lab work, injections, and some equipment or medications.

Prescriptions for medications can be filled in Alfred at the Alfred Pharmacy or phoned in to students' preferred locations.

Other types of specialist services can be arranged through referrals to the local hospitals in Hornell and Wellsville and practitioners in the area. Students maintain the right to choose a health care provider or hospital and must assume all financial obligations for off-campus health care.

Immunization Requirements

Students born after December 31, 1956 must show proof of 2 measles, mumps, and rubella shots after their 1st birthday or written documentation of immunity to measles, mumps, and rubella, as required by New York State Public Health Law 2165. A Tuberculosis screening and completion of Meningitis Vaccination Response form or Meningitis Vaccine are also required. A hold is placed on new students' registration activities until immunization records are received and cleared through Health Services. Students not in compliance will be withdrawn from AU and will not be able to attend classes. Questions regarding this requirement or any other aspects of student Health Services may be directed to the staff at Health Services at 607-871-2400.

Health Insurance

Alfred University expects students to carry health insurance. This can be done through various insurers. All student athletes are mandated to provide proof of their health insurance.

Wellness Education

The mission of the Wellness Education program is to promote lifetime healthy lifestyle choices through education, activities, and services to the campus community. Services for students include:

- Individual wellness education sessions
- Individual alcohol and drug education sessions
- Student internship opportunities
- Presentations for classrooms and residence halls
- Promotion of healthy lifestyle choices through events and social norm campaigns
- Referrals for students seeking assessment or evaluation for alcohol or substance abuse
- Data collection for needs assessment and program evaluation
- Campus policy review and recommendations

For more information or to make an appointment for a Wellness Education session, contact the Wellness Center at 607-871-2300.

Beth Robinson Judson Leadership Center

The JLC of Alfred University is the home of the Women's Leadership Center, the Gary Horowitz Leadership Development Program, and the Saxon Sidekicks mentoring program for first-year students. Events include annual conferences, seminars, workshop series, Women of Influence speakers and networking events with alumni. Of particular interest is the Women's Leadership Academy, a selective and academically based experience providing deep training and mentoring over the course of an academic year.

Consumer Complaint Procedure

For all types of complaints concerning colleges and universities in New York State, the first course of action must be to try to resolve the complaint directly with the administration of the college or university involved. The Office of College and University Evaluation will not review a complaint until all grievance procedures at the institution have been followed and all avenues of appeal exhausted and documentation provided that such procedures have been exhausted. Please note: Every New York State college and university is required to establish, publish, and enforce explicit policies related to redress of grievances.

See the “Academics” section of this catalog beginning on p. 27 for policies on grades and grading and the process to petition for a change of grade. A complaint involving discrimination or sexual harassment should be directed to the Title XI Coordinator/ EEO Officer at 607-871-2909 or 607-382-0468 after hours. A complaint involving consumer fraud or financial aid should be directed to the Director of Financial Aid at 607-871-2159.

Please do not send a complaint to the Office of College and University Evaluation until you have read all of the information below. This will assure that you are sending your complaint to the appropriate agency/office. The Office of College and University Evaluation handles only those complaints that concern educational programs or practices of degree-granting institutions subject to the Regulations of the Commissioner of Education, with the exceptions noted below.

- The Office does not handle anonymous complaints.
- A complaint involving discrimination against enrolled students on the part of an institution or faculty, or involving sexual harassment, should be filed with the U.S. Office for Civil Rights, 75 Park Place, New York, NY 10007. Complaints about two-year colleges concerning sexual harassment/discrimination based on race, ethnicity, gender and disabilities may also be reported to the Office of Equity and Access, VATEA Program, 10th Floor, Education Building Addition, Hawk Street, Albany, NY 12234.
- A complaint of consumer fraud on the part of the institution should be directed to the Office of the New York State Attorney General, Justice Building, Empire State Plaza, Albany, NY 12223.
- The Office of College and University Evaluation does not intervene in matters concerning an individual’s grades or examination results, as these are the prerogative of the college’s faculty.
- The Office does not handle complaints concerning actions that occurred more than five years ago.
- The Office does not intervene in matters that are or have been in litigation.
- For a complaint about state student financial aid matters, contact the Higher Education Services Corporation (HESC) Customer Communications Center at 1-888-NYS-HESC.
- Complainants should be aware that the Office of College and University Evaluation does not conduct a judicial investigation and has no legal authority to require a college or university to comply with a complainant’s request.

Complaints not excluded by any of the issues above should be

sent to:

New York State Education Department
Office of College and University Evaluation
Education Building
5 North Mezzanine
89 Washington Avenue
Albany, New York 12234

Student Rights under the Family Educational Rights and Privacy Act

The Family Educational Rights and Privacy Act of 1974, as Amended (FERPA) affords Alfred University students certain rights with respect to their education records.

Students' Rights

1. The right to inspect and review their education records within 45 days of the day the University receives a request for access. Students should submit to the registrar, dean, division chair, or other appropriate official, written requests that identify the record(s) they wish to inspect. The University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the University official to whom the request was submitted does not maintain the records, that official shall advise the student of the correct official to whom the request should be addressed.
2. The right to request the amendment of those education records believed by the student to be inaccurate or misleading. Students should write to the University official responsible for the record, clearly identify the part of the record they want changed, and specify why it is believed to be inaccurate or misleading. If the University official responsible for the record decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. In the same notification, the University will also advise the student of procedures for a hearing. Insofar as possible, the services of the University Ombudsman and the members of the Ombudsman's Student Grievance Committee will be used in these instances.
3. The right to consent to disclosures of personally identifiable information contained in their education records, except to the extent that FERPA authorizes disclosure without consent. Disclosure without consent may be made as follows:
    - To school officials with legitimate educational interest. A school official is a person employed by the University in an administrative, supervisory, academic or research, or support staff position (including Security and Wellness Center Health Services personnel); a person or company with whom the University has contracted (such as an attorney, auditor, or a collection agent and, specifically, the National Student Clearinghouse); a person serving on the Board of Trustees; or a student serving on an official University committee charged with a task that involves review of education records, or assisting another school official in performing his or her tasks. A school official has legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibility.
    - To parents of dependent students
    - In connection with financial aid
    - To Federal, State, and local authorities in connection with an audit or evaluation of compliance with education programs
    - To organizations conducting studies for or on behalf of educational institutions

- To comply with a judicial order or subpoena. (In most cases, the University must make reasonable effort to notify a student or former student in advance of compliance.)
- In connection with a health or safety emergency
- To an alleged victim of a crime of violence, the University may release the results of a related disciplinary hearing
- To the student
- To the public, at the discretion of the University, those portions of education records defined as "Directory Information." Note, however, that students may request that the University withhold Directory Information

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by Alfred University to comply with the requirements of FERPA. The name and address of the office that administers FERPA are:

   Family Policy Compliance Office
   U.S. Department of Education
   600 Independence Avenue, SW
   Washington, DC 20202-4605

Policies and Definitions

Education Records

"Education records" are defined as those records, files, documents, and other materials, which contain information directly related to the student from the first day of attendance at the University until graduation or withdrawal. An "eligible student" (that is, one who may request a review of his/her records) is defined as one who has attained 18 years of age or is attending a postsecondary institution. Former college students are permitted to have the same access to their records as those currently enrolled.

At Alfred University, students' records include the academic transcript and the cumulative academic file found in the Student Service Center as well as academic files maintained in the offices of the academic deans, and in many instances, by academic advisors. Student folders are also retained in the Student Affairs Office in the Powell Campus Center as records, if any exist. Additionally, records or files for some or all students will be found in the Financial Aid Office, the Business Office, Career Development Center, and Wellness Center Health Services. Appropriate administrative officers and staff, as well as appropriate academic deans, chairpersons, and faculty advisors have access to these files. The Privacy Act does not give students the right to see personal notes of teachers or administrators provided that those notes are not available to any third party. These personal notes are not considered to be part of the "education record." The records of physicians or psychologists or other professionals or paraprofessionals who assist in the treatment of students are not available to students, although those records be reviewed by a physician or other professional of the student's choice. Students can gain access to their parents' financial aid forms only if their parents sign a waiver allowing them such access. A student preparing a placement file will be permitted the option of requesting references which are available for his/her inspection or (by waiving his/her rights to see certain letters) those that are confidential. Students are also allowed to waive their rights to see certain other documents, including

letters of recommendation for admission to graduate or professional schools or receipts of awards.

Directory Information

The release of "directory information" without a student's consent is permitted unless the student has placed restrictions on such release. The University notifies students each year of their right to restrict the release of directory information. At Alfred University, directory information is defined to include information such as the student's name, local and home address and telephone number, e-mail address, photograph, date and place of birth, major field of study, class year, level of enrollment (full or part-time) and name, home address, and telephone number of parents. Also included are participation in officially recognized activities and sports, weight and height of members of athletic teams, receipts of scholarships, honors and awards, inclusion in Dean's lists and graduation lists, dates of attendance and the most recent previous education agency or institution attended by the student. Other similar directory data elements may be introduced from time to time.

Though permitted under FERPA, Alfred University does not, as a matter of general policy, release name, address, and telephone number lists of students or parents to any person or organization outside of the University community. However, as required by separate federal legislation known as "the Solomon Amendment," lists of current students are provided to military recruiters. The University does, as a matter of policy, routinely release name, address, and telephone number lists within the University community to student groups and organizations. Please note: When name and address lists are released as described above internally or externally, students who have placed restrictions on the release of directory information are never included.

Review and Challenge of Education Records

Any eligible student who wishes to inspect and review an education record should make such a request to the administrative officer in the specific office where that record is maintained. The University must respond to the request not later than 45 days from the date of the request. Normally, access will be possible without delay. Records will not be released from University files for removal for inspection elsewhere. Copies may be made of most records at prevailing University rates.

Any student may request a hearing to challenge the content of any record and may seek the correction or deletion of any entry deemed inaccurate, misleading, inappropriate, or otherwise in violation of the privacy or other rights of students. At Alfred University, any question about the accuracy of student records should first be brought to the attention of the officer of the University responsible for maintaining the file. An attempt will be made to settle such a dispute through informal meetings and discussions. If this is unsatisfactory or unproductive, a hearing will be held and a decision rendered by a University official with no personal stake in the outcome. Insofar as is possible, the services of the University Ombuds Officer and the members of the Ombuds Officer's Student Grievance Committee will be utilized in these instances.

Academics

Academic Regulations

University Libraries

Herrick Memorial Library

Herrick Memorial Library is committed to providing curriculum-centered collections, personal service, and state-of-the-art access to information.

Built in 1957 and renovated in 2007, it provides space for group study, supported by appropriate technologies, in its learning commons. There is space for reflection and/or discussion in its lounge, where new journals, books and newspapers can be enjoyed with a cup of coffee. During the academic year the library is open 108 hours a week, with extended hours during final exam week. An all-night study room is available for use after the library closes, providing study space and a computer lab 24/7. The library also has four meeting rooms which can be reserved by members of the Alfred University community. Group study rooms and quiet, individual workspaces are also available, accommodating a wide variety of study preferences.

There are 40 computer workstations throughout the building and an additional 15 laptops which can be checked out for use in the library. Wireless access is available throughout the building.

Herrick Memorial Library's website provides round-the-clock access to the library catalog, electronic reserves, electronic journals and books, specialized databases, and other resources selected by our librarians to support student and faculty research. Herrick provides access to over 100,000 periodical titles and over 500,000 e-books. Its collection also contains recreational collections of books, movies and music.

Herrick also offers interlibrary loan and document delivery services, which provides access to materials from other libraries. Professional research support is available, enabling library users to make the most of their research efforts. Research questions can be submitted to "Ask a Question" on the library's website at any time.

Herrick's librarians are committed to supporting the University's educational mission and to promoting information literacy skills. It is the Library's goal to teach students how to locate, evaluate, and effectively use information. This is accomplished through course-related and individualized instruction as well as by providing research guides for specific subject areas.

Special Collections and the University Archives offers its collections and services in a secure, climate-controlled area. The area features an ornately decorated conference room with seventeenth century English oak paneling. The Archives provides primary source materials which document the history of the University, works closely with faculty to integrate the collections into the classroom, and actively digitizes material to expand access to the collections online.

Scholes Library

The Samuel R. Scholes Library of Ceramics, established in 1947, is a special library providing academic support for the University's programs in art and engineering. The

Scholes Library collections are internationally recognized as a resource for information on the art, science, technology, and history of ceramics and glass. The library also has outstanding holdings in the areas of advanced materials, photography, art history, contemporary art, electronic media, interactive graphic design, glass art, and sculpture. Resources include an extensive and specialized collection of books, media, and journal titles in print and electronic formats. Our Visual Resources collection includes thousands of digital images and 170,000 slides. Scholes Library is fully engaged in image digitization efforts that support and enhance classroom instruction.

During the academic year the library is open over 90 hours per week, with extended hours during final examination periods. Professional reference assistance is available during most open hours. In addition to providing assistance at the Reference Desk, the librarians offer instruction sessions tailored to the needs of art and engineering students, as well as one-on-one consultation appointments.

Scholes Library's physical facilities are designed to provide outstanding information services. Our facilities include group study rooms, graduate carrels, faculty studies, and meeting spaces. Patrons may make use of the computers and printers in our information commons, as well as those in our design-oriented Mac Lab. We also have several instruction and presentation spaces, specifically designed for lectures or creative collaboration.

Scholes Library also provides a home for special collections in art and science and the college archives. The Special Collections Room houses rare and unique materials, including a collection of artists' books and original theses and dissertations by graduates of the New York State College of Ceramics at Alfred University. The College Archives preserve historical documents and photographs relating to the history of the College. Under the supervision of a trained archivist, this facility serves as a resource for scholars researching the history of American ceramic art and science as well as the rich history of the college and its notable faculty.

Patrons can access quick links to the online catalog, many specialized indexes, and full-text article and image databases 24/7 via the library's website. Both of the Alfred University Libraries are full participants in the SUNYConnect System. SUNYConnect links libraries across the State University of New York to form a single multi-campus "virtual library," greatly expanding access to print and electronic resources for all Alfred University students.

Technology Resources

The goal of Alfred ITS is to provide communication tools and infrastructure that facilitate learning and prepare students for an information-based workplace; enabling them to seek, organize, analyze, and apply information and associated technologies appropriately.

The University has a 2,000 Mbps network that provides internet access to every residence hall room, classroom and office on campus. The network backbone was installed with 10 Gigabit fiber in anticipation of meeting future needs. In addition, the University has embarked on an aggressive computer upgrade initiative, replacing servers, student labs and faculty offices in an ongoing 4-year cycle.

The University uses a variety of approaches in making computers available to students. General and specialized computing labs are located throughout the campus providing

access to Windows and Macintosh operating systems. Laboratory computers are pre-configured with Microsoft Office 365, standard Internet browsers, and enterprise level antivirus software. Specialized software such as SPSS, Adobe Creative Cloud, Final Cut Express, Maple, Mathematica, MatLab, SolidWorks, ArcGis, Minitab and others are available in select lab settings. Wireless network access is available in most campus buildings and locations. Email, file storage space and personal web page hosting services are provided to current faculty, staff, and students.

Students may borrow Windows laptops through ITS equipment lending at the ITS Helpdesk on the bottom floor of Herrick Library. This program enables students with short-term computing needs to borrow a laptop for use anywhere on or off campus for up to 7 days. ITS Equipment Lending also offers audio/visual equipment for short-term use for class projects. Equipment includes: projectors, digital video cameras, digital audio recorders, and other related devices. Through the University's Microsoft Campus Agreement, all students can install, free of charge, Microsoft Office on their personal computers.

Alfred University provides a wide range of Web communication resources, including Canvas learning management system, Alfred Today, and the My AU portal, which support student academic, extracurricular, and social life. The MyAU portal features a mobile-responsive design, and provides easy access to frequently sought-after slices of information in single dashboard display. The portal dashboard is fully-customizable allowing campus users to reorganize the display of information based on their personal need.

Academic resources include Canvas, Ensemble Video streaming server and Ensemble Anthem, Zoom, Microsoft Teams, and Turnitin. Canvas is AU's Learning Management System. Instructors use Canvas to provide course materials and assignments, lead discussions, and give quizzes and exams. Canvas is used in both in-person and online courses. Ensemble allows instructors to upload videos so students may stream them on their computers or mobile devices. Ensemble Anthem is a lecture capturing service that allow instructors to record directly to the streaming server. Live, real-time classes and discussions can be held using Zoom or Microsoft Teams. Microsoft Teams can also be used for document sharing, collaboration, and group projects. Turnitin is a plagiarism detection service; students or instructors may upload papers and assignments and determine the document contains unoriginal material. Turnitin also integrates with Canvas.

Students register for classes through the on-line BannerWeb process. They can review their grades, check their student accounts, and print off their class schedules to name just a few of the features that Banner provides.

The AU Information Technology Help Desk provides service oriented support for campus technology needs. ITS also offers employment and technical experience through the Student Technology Assistants (STA) program.

The Center for Academic Success

The Center for Academic Success (CAS) is dedicated to helping students at Alfred University get the support they need to be academically successful. CAS services assist students at all levels in meeting the ever-changing demands of the educational environment. In addition to providing academic support to any student, CAS also

provides services and coordinates academic accommodations for students on campus who identify as having a disability.

Academic Support Services

Supplemental Instruction

Supplemental Instruction (SI) is an internationally recognized academic support program that consists of regularly scheduled, peer-led study sessions for traditionally difficult courses. SI sessions are facilitated by SI Leaders, undergraduate students who have previously taken the course and demonstrated academic competency in the subject area. Each SI Leader attends every class meeting, consults regularly with the instructor, and facilitates at least three 50-minute sessions per week using collaborative learning methods. Students are invited to attend as many SI sessions as they like!

Tutoring Services

Drop-in peer tutoring is available for many courses offered at Alfred University. Individually scheduled peer tutoring is also available for other courses upon request. Students interested in tutoring are encouraged to stop by CAS to meet with a staff member to discuss their learning needs, review various campus resources, and arrange the appropriate level of tutoring services.

Writing Center

The Writing Center provides free writing assistance to all Alfred University students, faculty, and staff. Student tutors represent a wide range of academic disciplines and are trained to deal with all kinds of writing tasks. Tutors can assist writers with discovering ideas, organizing information, revising a final draft, or preparing technical documents.

Disability Services

CAS coordinates academic accommodations, provides support services, consultation, and advocacy for students with learning, physical, and/or psychological disabilities. Services are intended to maximize independence and encourage the integration of students with disabilities into all areas of college life.

Assurance of equal educational opportunities rests upon legal foundations established by federal law, specifically Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. By federal law, a person with a disability is a person who:

- Has a physical or mental impairment;
- has a record of such impairment; or
- is regarded as having such an impairment that it substantially limits one or more major life activities such as self-care, walking, seeing, hearing, speaking, breathing, or learning.

In order to determine whether an individual is entitled to protections and services under the law, CAS requires documentation that verifies that the individual has a disability.

Recent documentation provided by a properly credentialed professional should include a diagnostic statement identifying the disability, the diagnostic methodology used, as well as a description of the current functional limitations and how they can be accommodated. This allows CAS staff to appropriately determine eligibility and reasonable accommodations.

Website

Mailing Address:
Center for Academic Success
Herrick Library
Alfred University
1 Saxon Drive
Alfred NY 14802

Phone: 607-871-2148
Email

Allen Term (Winter Term) and Summer Term

Allen Term is a 5-week session between the end of Fall Semester in mid-December and the start of Spring Semester in mid-January. Online courses and travel and other types of off-campus courses are offered during Allen Term.

Summer School is offered in one 12-week session, two six-week sessions, and short-term, intensive sessions of three or four weeks. Summer School offers a variety of courses at the undergraduate and graduate level. Summer Term at AU includes on-campus courses as well as online and hybrid courses that combine online learning with some on-campus classes.

Allen Term and Summer School are appropriate for people who:

- want to accelerate undergraduate studies
- are interested in graduate work
- need to make up a course or complete certain requirements
- wish to expand knowledge or skills in a variety of fields

Students enroll in courses for which they are qualified by experience or previous preparation. (Some advanced courses, however, may not be taken unless prerequisite requirements have been fulfilled.) Regular attendance is expected.

Students enrolled in another institution who plan to attend Allen Term or Summer School at Alfred University should consult an official at their home school in advance to be sure the courses are appropriate to their degree programs.

For additional information contact:

Student Service Center
Alfred University
1 Saxon Drive
Alfred, New York 14802

Phone: 607-871-2123
Email

University Honors Program

The Alfred University Honors Program is designed to enrich the lives of exceptional students. More than 150 "Alfred University Scholars" represent all colleges and schools within the University.

Honors seminars are the heart of the program. These informal classes, with an enrollment limit of 15, meet one evening each week throughout the semester.

The discussion/debate is usually lively, because the seminars are chosen by the students themselves. Over a two-year period 25-30 seminars are offered, on topics as diverse as A Beginner's Guide to World Domination, T'ai Chi: A Way of Life, Wiseguys, Whackos and Whiners, Soundtrack to Rebellion: Metal, Punk, and Hardcore, Drinking Up: The History and Science of Alcohol, Invest Like Buffett, or Mysteries of the Brain.

The other academic component of Honors is the senior thesis. Theses come in all shapes and sizes, but the common thread is a chance to work closely with three faculty mentors on a project of substance. Theses are bound and become part of Herrick Memorial Library's permanent collection.

Anyone with an outstanding high school record and a broad range of intellectual interests may apply. For more information, check out the Honors link on the Alfred University website, email or write to Dr. Juliana Gray, Honors Program, Alfred University, One Saxon Drive, Alfred, NY, 14802.

Studying Abroad

Alfred University encourages students to consider opportunities for studying abroad. There are many programs and options available. Approved programs can be found on our website.

Planning your Study Abroad

Participation in a study abroad program of at least a semester’s duration is supported for all majors. With planning, students who are Language or Comparative Cultures majors have been abroad for longer periods, spanning an academic year or two semesters.

No time is too early to start planning. We recommend the following steps to success:

1. Start conversations early with both your academic advisor and the Office of International Programs.
2. Note application deadlines – generally you will need to submit a complete application for study abroad early in the term before you wish to be abroad (if you want to go abroad in the fall, your application will be due in early spring and vice versa). It is good practice to speak with the Office of International Programs approximately a year before you wish to go, as deadlines can be as early as September 1st for Spring Term programs and February 1st for Fall term programs.
3. Keep your grades up! All programs have minimum eligibility requirements, including GPA, class standing or course prerequisites.
4. Stay out of trouble. Student conduct is a factor is the study abroad application and approval process.

5. Stay informed and on top of your AU finances. Being knowledgeable about your financial aid package (if applicable) and understanding AU billing will make choosing the right program easier.
6. Consider language studies. Though not necessary to study abroad (many countries have English as an official language), knowing a second language opens up your options.

Study Abroad Academic Policies

Courses and Course Load

- Students must obtain prior approval from the Dean and others (see below) for the courses and credits taken on study abroad. Once all signatures have been obtained, course approval forms (and all supporting course descriptions or syllabi) must be filed with the Office of the Registrar – no exceptions. The courses and credits will be applied (as listed on the course approval form) to the Alfred University record upon receipt of an official transcript (see below). Any course not approved in advance and in writing may not earn any credit.
- Any subsequent changes to pre-approved coursework must be approved in writing.
- All pre-approved courses taken abroad appear on the Alfred University transcript with a grade of CR (credit earned) or NC (no credit earned). Credit is earned for approved courses that are passed.
- The CR/NC grades from a study abroad program are not included in the calculation of the Alfred University grade point average (GPA).
- Official transcripts must be received within six months of the completion of the coursework directly from the institution abroad to the Office of the Registrar: Registrar, Alfred University, 1 Saxon Drive, Alfred, NY 14802. Unofficial transcripts, including official copies handled by the student, are not acceptable.
- Credit systems around the world vary, and final conversions are calculated by the Office of International Programs in consultation with the Office of the Registrar. As an example, a common method of indicating credit internationally is the European Credit Transfer System; one ECTS credit has been determined to equal 0.6 semester credit hours at AU; this means that a successful credit load abroad of 30 ECTS credits will be listed as 18 Alfred University credits.
- Financial aid regulations mandate a minimum successful enrollment in, and completion of, the equivalent of 12 U.S. credits per semester.
- Residency requirement: Undergraduate students must complete at least 45 credit hours in residence at Alfred University. “In residence” means courses offered by Alfred University on campus, at an extension site, or through distance education. All students must complete their final 30 semester credit hours in residence. (Students who have met the 45 hour residency requirement and who are approved for study abroad in the second to last semester before graduation are exempt from the requirement to be in residence for the final 30 credit hours, but must be in residence in the final semester.)
- Participation in a study abroad program precludes simultaneous registration for AU coursework (independent study, internships, etc.). The off-campus study program must report all credit earned for the semester abroad.
- Students who remain registered for regular classes (non-OCST) on-campus in Alfred on the first day of the term here are charged AU tuition for those classes.

Required Pre-departure Class

All students going abroad for a semester or longer are required to enroll in OCST 301. This class is designed to prepare students for living and studying in a different country for 4 months or longer. It is a B-block class (meets only in the second half of a semester) and students will enroll during the semester prior to the semester they plan to study abroad.

Programs

Deadlines

General Education Goals

Alfred University endorses the American Association of Colleges and Universities initiative, “Liberal Education & America’s Promise” (LEAP). Our university general education goals are built on this framework. Graduates of Alfred University will:

- acquire knowledge about human cultures, the arts and humanities, and the physical and natural worlds
- frame important questions and evaluate relevant information
- produce, analyze and interpret data quantitatively
- understand the interconnectedness of self, community and planet with an awareness of ethical implications
- communicate proficiently in writing, orally and using interpretive and expressive forms
- contribute effectively on diverse teams
- acquire information and utilize contemporary tools expected of their discipline
- demonstrate the integration of multiple areas of knowledge, diverse perspectives, and relevant skills

These AU general education goals are accomplished through a network of curricula that embrace the University mission and values while preserving the distinctiveness of each program.

- The College of Liberal Arts and Sciences curricula addresses the university general education goals through both a breadth of study and the depth offered in the majors
- The College of Business fosters general education outcomes through both a strong liberal arts foundation and contemporary, innovative courses that prepare students for professional careers
- The Inamori School of Engineering embeds university general education goals in its inquiry-based programs to prepare technically proficient and broadly educated engineers and scientists
- The School of Art and Design incorporates university general education goals throughout its multi-disciplinary curriculum that cultivates creative and scholarly research in art

The goals are further supported through the university libraries and Student Affairs programming.

Through meeting these common general education goals, all Alfred University students develop social responsibility and the ability to use intellectual, practical and creative

skills in problem solving. AU graduates are well-educated, independent thinkers prepared for a rapidly changing world and lives of continuous intellectual and personal growth.

Double Major/Double Degrees

Students earn one baccalaureate degree with two majors (“double major”) if the majors are offered in the same College or School (except for BS and BFA in the School of Art and Design; see below). Students must complete the requirements for both majors and all other baccalaureate degree requirements that were in effect when the student was admitted (or last readmitted) to undergraduate study at AU. This includes all University, College/School, and major requirements. There is no total credit hour requirement for a double major beyond the minimum required for the degree program when only one major is completed. One diploma is presented at graduation. Note: A student may not add a second or subsequent major to a degree that has already been awarded.

Students may earn two baccalaureate degrees to be awarded simultaneously (“double degrees”) when:

- the two different degree programs are offered within a single school (e.g., the B.S. and B.F.A in the School of Art and Design or the B.S. and B.A in the College of Liberal Arts and Sciences) .
- the two degree programs are offered by two distinct AU Colleges/Schools. (e.g.: B.A. in the College of Liberal Arts and Sciences, B.F.A. in the School of Art and Design; a B.S. degree program offered by any one of the University’s four Colleges/ Schools.)
- the two B.S. degree programs are in the Inamori School of Engineering as shown below. Note that each B.S. degree program requires completion of a unique Senior Thesis or Senior Design Project for each degree program:

	BMES	**CERE**	**GES**	**MATS**	**MECH**	**RNEW**
BMES	na	Yes	Yes	Yes	Yes	Yes
CERE	Yes	na	No	No	Yes	Yes
GES	Yes	No	na	No	Yes	Yes
MATS	Yes	No	No	na	Yes	Yes
MECH	Yes	Yes	Yes	Yes	na	Yes
RNEW	Yes	Yes	Yes	Yes	Yes	na

Note that students may also double major within the B.A. in the College of Liberal Arts and Sciences, but that the B.S. programs are degrees not majors. Hence, a student cannot “double major” in different B.S. programs, but could double degree as described above.

To receive two degrees simultaneously, students must complete all University, College/ School, and major requirements in effect for both programs at the time the student was admitted (or last readmitted) to undergraduate study at AU and earn a minimum of 148 semester credit hours. Two diplomas are presented at graduation.

Earning a Minor

A student must be a matriculated, undergraduate student to pursue minor/s.. Any student pursuing one of various minors offered must complete all requirements for the minor/s by the time the student expects to graduate.

Bachelor of Arts Degree for Those Holding a Professional School Degree

Any person who has completed three or more years at Alfred University, who holds no undergraduate degree, and who has subsequently earned the M.D., D.D.S., D.V.M., J.D., or comparable professional degree from an accredited college or university, will be granted, upon request, an Alfred University Bachelor of Arts degree. Upon receipt at AU of an official transcript from the school that conferred the professional degree and of an Application to Graduate, the B.A. degree will be conferred at the next opportunity.

Degrees Awarded Posthumously

Alfred University may confer posthumous baccalaureate and graduate degrees upon students who are deceased prior to completion of all degree requirements of the program being pursued.

To be eligible for consideration, the student must have been nearing completion of coursework required for the degree and must have been in good academic standing with a grade point average sufficient to have earned the degree.

Recommendation for award of the degree must be made by the faculty in the student's major area, and approved by the Chair or Director, the College or School Dean, and the Provost. Final approval for awarding of posthumous degrees shall rest with the Board of Trustees, which will act upon the recommendation of the President of Alfred University.

Degree Requirements

In order to satisfy the requirements for a Bachelor’s Degree a student must:

- Complete all course requirements, including those required for the major, general education, and the minimum number of credits for the degree sought as set forth by the faculty of the college or school in which the student is enrolled, and as described under “major requirements” in this catalog.
  Note: A three semester hour transfer course may be used to satisfy a four semester hour AU requirement in a major or in general education. However, the minimum number of total semester credit hours for the degree must still be earned to complete degree requirements.
- Earn a cumulative grade point average (GPA) of at least 2.00
- Satisfy the Common Ground Requirement
  This requirement is satisfied by completing with a passing grade the 1-credit course UNIV 101-Common Ground
- Satisfy the Global Perspective Requirement. This requirement may be satisfied by:
  1. Taking an approved “GP” course
  2. Participating in an international co-op program or internship

3. Studying abroad
4. Going on a course-based faculty-led international study trip
5. Completing one semester of secondary or postsecondary education outside the United States

- Satisfy the Lifetime Health and Wellness requirement
  The physical activity portion of the requirement can be satisfied by one of the following:
  1. One PFIT course or one of the specific Dance and Equestrian courses that have the “Physical Activity” (PFIT) attribute
  2. Participation in one varsity sport for an entire season (as certified by the Athletic Department)
  3. A lifetime sports proficiency Challenge Exam (requires both written and physical tests; current fee: $225)
  4. Current active military service (including National Guard, Reserves, or the ROTC program’s MILS 101 or MILS 102)

The wellness portion of the requirement can be satisfied by taking one WELL course or another course that has been approved for this purpose and that has the “WELL” degree attribute.

- Request legal conferral of degree (apply to graduate) and satisfy financial obligations to the University. Written application for graduation must be made to the Registrar at least 60 days before the expected degree conferral date.
- Earn at least 45 semester credit hours at Alfred University
- Be in residence at Alfred University at least during the final 30 credit hours earned toward the degree (see policy on Transfer Credit)

Advanced Placement (AP) Examination Equivalencies

AP Examination	Credit-Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
Art History	4 or 5	4	ARTH 130 and ARTH 140 (Area C)
Biology	4 or 5	4	BIOL 150 (Area F-I)
Calculus AB	4 or 5	4	MATH 151 (03-QR)
Calculus BC	3	4	MATH 151 (03-QR) (w/Calc AB Subscore of 4 or 5)
	4 or 5	8	MATH 151 (03-QR) and MATH 152
Chemistry	4	4	CHEM 105 and CHEM 105L (Area F-I)
	5	8	CHEM 105 and 105L and CHEM

AP Examination	Credit-Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
			106 and CHEM 106L (Area F-I)
Computer Science A	3, 4, or 5	4	CSCI 156
Computer Science AB	3	4	CSCI 156
	4 or 5	8	CSCI 156 and CSCI 157
Economics Macro	4 or 5	3	ECON 202
Economics Micro	4 or 5	4	ECON 201 (Area E2)
English Language and Composition	4	4	ENGL 101 (01-WR)
	5	6	ENGL 101 (01-WR) + 2 Cr Elective
English Literature and Composition	4	4	ENGL 101 (01-WR)
	5	6	ENGL 101 (01-WR) + 2 Cr Elective
Environmental Science	4 or 5	4	ENVS 101
French Literature	4 or 5	4	FREN 102 (02-FL)
French Language	3 or 4	4	FREN 102 (02-FL)
	5	4	FREN 202 (FL)
German Language	3 or 4	4	GRMN 102 (02-FL)
	5	4	GRMN 202 (02-FL)
Comparative Government & Politics	4 or 5	4	POLS 110 (Area E2)
U.S. Government & Politics	4 or 5	4	POLS 110 (Area E2)
World History	4	4	HIST 100 (Area D)
	5	8	HIST 100 (Area D) +4 Cr History Elective
U.S. History	4	4	HIST 211 (Area D)
	5	8	HIST 211 and HIST 212 (Area D)
European History	4	4	HIST 110 (Area D)
	5	8	HIST 110 and HIST 111 (Area D)
Human Geography	4 or 5	4	General Ed (Area E3)
Italian	4 or 5	4	ITAL 102 (02-FL)
Latin Literature	4 or 5	4	LATN 102 (02-FL)

AP Examination	Credit-Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
Music Theory	4 or 5	4	MUSC 120 (Area C)
Physics B	4	4	PHYS 111 (Area F-I)
	5	8	PHYS 111 and PHYS 112 (Area F-I)
Physics C: Mechanics	4 or 5	4	PHYS 125 (Area F-I)
Physics C: Elec & Magnet	4 or 5	4	PHYS 126 (Area F-I)
Psychology	4 or 5	4	PSYC 101 (Area E1)
Spanish Language	3	4	SPAN 102 (02-FL)
	4	4	SPAN 201 (02-FL)
	5	4	SPAN 202 (02-FL)
Spanish Literature	4 or 5	4	SPAN 102 (02-FL)
Statistics	4 or 5	3	BUSI 113 (03-QR)
Studio Art – Drawing	4 or 5	4	ART 111 (Area C)
Studio Art – 2D/3D (General)	4 or 5	4	ART 100 (Area C)

College Level Examination Program (CLEP) Equivalencies

Only CLEP subject exams taken prior to admission to Alfred University are considered for credit toward the degree.

CLEP Examination	Credit-Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
Composition and Literature:			
American Literature	50*	4	ENGL 240
Analyzing & Interpreting Literature	50*	4	General Elective
College Composition Modular	50*	4	ENGL 101
English Literature	50*	4	ENGL 219
English Composition	n/a	none	none

CLEP Examination	Credit-Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
Humanities * Credit is granted only with an acceptable locally-graded essay	n/a	none	none
Science and Mathematics			
College Algebra	50	3	MATH 115 (03-QR)
Algebra-Trigonometry	50	3	MATH 118 (03-QR)
Biology	50	4	BIOL 100 (Area F-II)
Chemistry	50	4	CHEM 100 (Area F-II)
Calculus with Elementary Functions	50	3	MATH 151 (03-QR)
Trigonometry	50	3	General Elective
College Mathematics	50	4	MATH 101 (03-QR)
Natural Science	n/a	none	none
Foreign Languages			
French	50-61	4	FREN 101 (02-FL)
	62+	8	FREN 101/FREN 102 (02-FL)
German	50-62	4	GRMN 101 (02-FL)
	63+	8	GRMN 101/GRMN 102 (02-FL)
Spanish	50-65	4	SPAN 101 (02-FL)
	66+	8	SPAN 101/SPAN 102 (02-FL)
History & Social Sciences			
American Government	50	3	POLS 110 (Area E2)
Educational Psychology	50	3	General Elective
Human Growth and Development	50	3	General Elective
Macroeconomics, Princ of	50	3	ECON 202
Microeconomics, Princ of	50	3	ECON 201 (Area E2)

CLEP Examination	Credit-Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
Psychology, Introductory	50	3	PSYC 101 (Area E1)
Sociology, Introductory	50	3	SOCI 110 (Area E3)
U.S. History I	50	3	HIST 211 (Area D)
U.S. History II	50	3	HIST 212 (Area D)
Western Civilization I	50	3	HIST 100 (Area D)
Western Civilization II	50	3	HIST 100 (Area D)
Social Sciences & History	n/a	none	none
Business			
Accounting, Principles of	50	3	ACCT 211
Business Law, Intro	50	3	LAW 241
Information Sys/ Computer Apps	50	3	MIS 101
Management, Principles of	50	3	MGMT 328

International Baccalaureate (IB) Equivalencies

Alfred University grants 30 semester hours of credit (sophomore standing) to students who have earned the IB diploma in high school. Scores of 4 or better on the higher-level (HL) exams and scores of 5 or better on the subsidiary level (SL) exams are considered for equivalent course credit. When necessary, liberal arts general elective credits are awarded to reach a total of 30 credits.

Students who have not completed the IB diploma are awarded equivalent course credit for up to two introductory courses for each higher level exam (HL) in which a grade of 5 or better was earned. Equivalent credit for one introductory course is awarded for each subsidiary level examination (SL) in which a grade of 6 or better was earned.

IB Examination (level)	Credit Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
Economics (HL)	4*-5	4	ECON 201 (Area E2)
Language A (English): Language and Literature (HL)	4*-5	4	ENGL 101 (01)

IB Examination (level)	Credit Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
Language A (English): Literature (HL)	4-5	4	ENGL 220
Languages (HL)	4*-5	4	(Lang) 101 (02)
Visual Arts (HL)	4*-5	4	ART 100 (Area C)
History of Americas (HL)	4*-5	4	HIST 211 (Area D)
History of Europe (HL)	4*-5	4	HIST 107 (Area D)
Biology (HL)	4*	4	BIOL 100 (Area F-I)
Biology (HL)	5	4	BIOL 150 (Area F-I)
Chemistry (HL)	4*-5	4	CHEM 103 (Area F-I)
Mathematics (HL)	4*-5	4	MATH 101 (03)
Physics (HL)	4*-5	4	PHYS 111 (Area F-I)
Psychology (HL)	4*-5	4	PSYC 101 (Area E1)
Theatre (HL)	4*-5	4	THEA 110 (Area C)
Theory of Knowledge	B or A	4	PHIL 101 (Area B)

*Please Note: a 4 is considered for equivalent credit on HL exams only for students who have earned the IB Diploma

IB Examination (level)	Credit Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
Economics (HL)	6-7	7	ECON 201, 202 (4 Cr. Area E2)
Language A (English): Language and Literature (HL)	6-7	8	ENGL 101, 102 (01)
Language A (English): Literature (HL)	6-7	8	ENGL 220
Languages (HL)	6-7	8	(Lang) 101, 102 (02)
Visual Arts (HL)	6-7	8	ART 100 (Area C)
History of Americas (HL)	6-7	8	HIST 211, 212 (Area D)
History of Europe (HL)	6-7	8	HIST 107, 200 (Area D)
Biology (HL)	6-7	4	BIOL 150 (Area F-I)

IB Examination (level)	Credit Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
Chemistry (HL)	6	4	CHEM 105 (Area F-I)
	7	8	CHEM 105, 106 (Area F-I)
Mathematics (HL)	6-7	8	MATH 101, 115 (03)
Physics (HL)	6-7	8	PHYS 111, 112 (Area F-I)
Psychology (HL)	6-7	8	PSYC 101 (Area E1), PSYC 100 (psychology elective)
Theatre (HL)	6-7	8	THEA 110, 200 (4 Cr. Area C)

IB Examination (level)	Credit Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
Economics (SL)	5*-7	4	ECON 201 (Area E2)
Language A (English): Language and Literature (SL)	6-7 or SL 5 w/ IB diploma	4	ENGL 101 (01)
Language A (English): Literature (SL)	6-7 or SL 5 w/ IB diploma	4	ENGL 220
Literature and Performance (SL)	SL 5 w/ IB diploma or 6-7	4	ENGL 220
Languages (SL)	5*-7	4	(Lang) 101 (02)
Visual Arts (SL)	5*-7	4	ART 100 (Area C)
History of Americas (SL)	5*-7	4	HIST 211 (Area D)
History of Europe (SL)	5*-7	4	HIST 107 (Area D)
Biology (HL)	5*-7	4	BIOL 100 (Area F-I)
Chemistry (HL)	5*-7	4	CHEM 103 (Area F-I)
Mathematics (SL)	5*-7	4	MATH 101 (03)
Mathematical Studies (SL)	5*-7	4	MATH 101 (03)
Physics (SL)	5*-7	4	PHYS 111 (Area F-I)

IB Examination (level)	Credit Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
Psychology (SL)	5*-7	4	PSYC 101 (Area E1)
Theatre (SL)	5*-7	4	THEA 110 (Area C)

*Please Note: a 5 is considered for equivalent credit on SL exams only for students who have earned the IB Diploma

Global Perspective (GP) Requirement

Courses

Anthropology

- ANTH 110 Cultural Anthropology - 4 Credits
- ANTH 303 Health and Culture - 4 Credits
- ANTH 304 Language and Culture - 4 Credits
- ANTH 309 Magic and Religion - 4 Credits
- ANTH 312
- ANTH 495 Global Issues Seminar - 4 Credits

Art History

- ARTH 210 Global Perspectives: Paris - 2 Credits
- ARTH 304 Global Arts: Contemporary Asia - 4 Credits
- ARTH 352 Contemporary Projects in Art - 4 Credits
- ARTH 354 Recent Sculptural Practices - 4 Credits
- ARTH 382 Gender and Art History: Feminist Art in a Global Frame - 4 Credits
- ARTH 445 Understanding Culture through the Lens of World Cinema - 4 Credits
- ARTH 466 Histories of Photography in the Non-Western World - 4 Credits

Business

- BUSI 305 German Auto Industry - 4 Credits
- BUSI 457 International Business - 3 Credits

Communication Studies

- COMM 221 Pop Culture Goes Global - 4 Credits
- COMM 315 Understanding Global Media and Cultural Change - 4 Credits
- COMM 325 Global Communication - 4 Credits

Economics

- ECON 412 International Economics - 3 Credits

English

- ENGL 226 The Holocaust and Literature - 4 Credits
- ENGL 481 International Women Writers - 4 Credits

Environmental Studies

- ENVS 101 Environmental Studies I - Natural Science - 4 Credits
- ENVS 102
- ENVS 310 Ecology of the Bahamas - 3 Credits

Equestrian Studies

- EQUS 228 The Equine Industry in Ireland - 2 Credits

Finance

- FIN 458 International Financial Management - 3 Credits

French

- FREN 210 Global Perspectives: Paris - 2 Credits
- FREN 316
- FREN 485 Internship in French - 1 to 4 Credits

German

- GRMN 485 Internship in German - 1 to 4 Credits

Global Studies

- GLBS 101 Introduction to Global Studies - 4 Credits
- GLBS 210 Global Perspectives: Paris - 2 Credits
- GLBS 213 Speaking the Unspeakable: Argentina's Literature of Dictatorship - 4 Credits
- GLBS 215
- GLBS 216
- GLBS 221 Pop Culture Goes Global - 4 Credits
- GLBS 315 Understanding Global Media and Cultural Change - 4 Credits
- GLBS 325 Global Communication - 4 Credits

- GLBS 351 European Politics - 4 Credits
- GLBS 466 Histories of Photography in the Non-Western World - 4 Credits
- GLBS 495 Global Issues Seminar - 4 Credits

History

- HIST 107 The World in the 20th Century - 4 Credits
- HIST 111 Modern Western History - 4 Credits
- HIST 301 America in War during the 20th Century - 4 Credits
- HIST 321 The History of Fascism - 4 Credits
- HIST 322 Churchill, Stalin, Roosevelt, Hitler - 2 Credits
- HIST 326
- HIST 327
- HIST 382 Latin American Politics - 4 Credits
- HIST 383 The Nazi Holocaust - 2 Credits

Marketing

- MKTG 489 International Marketing - 3 Credits

Music

- MUSC 211 World Music - 4 Credits

Political Science

- POLS 253 Dictatorship and Democracy - 4 Credits
- POLS 271 World Politics - 4 Credits
- POLS 321 The History of Fascism - 4 Credits
- POLS 351 European Politics - 4 Credits
- POLS 373 Terrorism and International Security - 4 Credits
- POLS 382 Latin American Politics - 4 Credits

Religious Studies

- RLGS 105 Introduction to Religions of the World - 4 Credits
- RLGS 165 Asian Religions - 4 Credits
- RLGS 274 Hindu Religious Traditions - 4 Credits

Social Justice Studies

- SJST 213 Speaking the Unspeakable: Argentina's Literature of Dictatorship - 4 Credits
- SJST 217 Exiled from Justice: Equatorial Guinean Writers in Africa and Spain - 4 Credits

- SJST 226 The Holocaust and Literature - 4 Credits
- SJST 382 Gender and Art History: Feminist Art in a Global Frame - 4 Credits

Sociology

- SOCI 343 Race and Ethnicity - 4 Credits
- SOCI 495

Spanish

- SPAN 213 Speaking the Unspeakable: Argentina's Literature of Dictatorship - 4 Credits
- SPAN 215
- SPAN 216
- SPAN 217 Exiled from Justice: Equatorial Guinean Writers in Africa and Spain - 4 Credits
- SPAN 218 The Bombs and Ballots of Basque Literature in Spain - 4 Credits
- SPAN 312 Peninsular Culture and Literature II: 19th - 20th Century - 4 Credits
- SPAN 316 Latin American Culture and Literature II - 4 Credits
- SPAN 485 Internship in Spanish - 1 to 4 Credits

Women’s and Gender Studies

- WGST 215
- WGST 216
- WGST 382 Gender and Art History: Feminist Art in a Global Frame - 4 Credits
- WGST 481 International Women Writers - 4 Credits

Registration, Scheduling and Attendance

Each student is assigned a faculty advisor who helps plan a course of study and who is available throughout the year. Students should also feel free to consult any faculty or staff member who might be able to help. Students are primarily responsible for their own academic progress, but all members of the faculty and administration are prepared to assist. Students must have their schedule or study plan for the following semester approved by their advisor(s) in order to register for classes. The written approval of the student's Dean is required to register for more than 18 credit hours in a semester (20 for School of Engineering).

Adding and Dropping Courses

A course may be added or dropped during the periods indicated in the Academic Calendar without penalty. Dropped courses do not appear on the student's transcript.

Withdrawing from a Course

A student may withdraw from a course and receive the grade of “W” with the signature of the instructor and the approval of the student's advisor during the period designated by the Academic Calendar.

Attendance

Regular class attendance is expected of all students. Under the “First Class Attendance Rule”, a student in a closed course who does not attend the first class meeting or communicate with the instructor or the Registrar's Office by the close of the day of the first class may be dropped from the course.

Leave of Absence/Withdrawal and Readmission

Taking a Leave of Absence

Alfred University recognizes that there are good reasons why a student may want or need to temporarily interrupt his or her education. Therefore, the University has established a leave of absence policy that assures students of the right to continue their education following a specified leave period.

- A student must make a written request for a leave of absence to the Dean
- The request must include the reason(s) for the leave and the length of time the student plans to be away. Leaves are generally granted for one or two semesters. A leave of absence will not usually be granted for a semester in progress.
- Before granting the leave the Dean will consult with the Student Affairs Office. Students on judicial probation will normally not be granted a leave
- Once a leave is granted the Dean will notify other interested University officials of the decision and the expected date of return
- There are circumstances (for example, a felony conviction) under which a student's leave and eligibility to return to the University, may be canceled
- A student who is granted a leave of absence to deal with medical and/or psychological problems must submit a clinical evaluation to the Student Affairs Office and be approved to return from leave by the Dean of Student Wellbeing
- A student who does not return from Leave of Absence when scheduled to do so will be administratively withdrawn from the University

Withdrawal and Readmission

A student who finds it necessary to withdraw from the University during the academic year or at the end of any semester must contact Student Affairs to initiate official withdrawal. Students who withdraw officially are eligible for a refund of the enrollment deposit.

Undergraduate students admitted to the University are expected to continue to register for classes at AU and to pursue their degree. Those admitted to full time study must enroll each Fall and Spring Semester. Students admitted to part time study must enroll at least once in any 12-month period. Unless on an approved leave of absence, those

who do not enroll on a regular basis as specified are administratively withdrawn from the University. Students withdrawn under this provision forfeit their enrollment deposit.

A student who has withdrawn from school or who has been withdrawn, suspended, or dismissed for any reason may be granted the opportunity to return. Application for readmission must be in writing to the Director of Admission. These applications must be submitted by August 1 for Fall Semester readmission or by December 1 for Spring Semester readmission. A readmitted student must complete the degree requirements of the University catalog in effect at the time of readmission or, at the student's choosing, the requirements of a later catalog.

Grades for Students Leaving School during the Semester

A student who formally leaves school during a semester by Leave of Absence or by Withdrawal will be given "W" grades in registered courses providing the deadline to withdraw from each course, as published in the Academic Calendar, has not passed. If the last day to withdraw from courses has passed, the instructor will record a final (non-W) letter grade. In case of extenuating circumstances the student's Dean may permit "W" grades to be recorded after the deadline has passed.

Religious Beliefs and Class Attendance

No person shall be expelled from or refused admission as a student to an institution of higher education for being unable, because of religious beliefs, to attend classes or to participate in any examination, study or work requirements on a particular day or days.

- Any student who is unable, because of religious beliefs, to attend classes on a particular day or days shall, because of such absence, be excused from any examination or any study or work requirements
- It shall be the responsibility of the faculty and of the administrative officials of each institution of higher education to make equivalent opportunities available to any student absent from school because of religious beliefs, to make up any examination, study, or work requirements which might have been missed because of such absence. No fees of any kind shall be charged for making such equivalent opportunity available
- If classes, examinations, study or work requirements are held after 4:00 p.m. on Friday, or on Saturday, similar or makeup classes, examinations, study or work requirements shall be made available on other days, where it is possible and practicable to do so, and no special fees shall be charged for these

In carrying out the provisions of this section, it shall be the duty of the faculty and of the administrative officials to exercise the fullest measure of good faith. No adverse or prejudicial effects shall result to any student because of availing him/herself of the provisions in this section. Any student who is aggrieved by the alleged failure of any faculty or administrative official to comply in good faith with these provisions shall be entitled to maintain an action or proceedings in the supreme court of the county to enforce his/her rights under this section.

Cross-Registration at Area Schools

To provide students with the opportunity to explore an area of interest not otherwise available, Alfred University participates in a cross-registration program with more than 15 area colleges and universities through the Rochester area Colleges (RAC) consortium. The list of participating RAC members includes nearby Alfred State College. Cross-registration under this program is available in Fall and Spring Semesters to full-time degree-seeking undergraduate students.

The course to be taken must be one that is not available at AU and it must be applicable to some component of the AU degree program. Faculty advisor approval is required.

Students should be aware that the various member schools operate on differing academic calendars. The registration deadlines and all other academic polices of the school offering the course apply. There is no additional tuition charge for RAC cross-registration, but any lab, materials, or other special fees must be paid.

Cross-registered courses count as “credit” only. The grades received do not affect the AU grade point average (GPA). Obtain a RAC cross-registration form from the Student Service Center or download & print. For more information, contact the Student Service Center in Seidlin Hall.

Credits, Grades and Grade Point Average (GPA)

The following grade designations are used at the undergraduate level:

Grade	Grade Points per Credit Hour	Meaning
A	4.00	Exceptional
A-	3.67	
B+	3.33	
B	3.00	Good
B	2.67	
C+	2.33	
C	2.00	Acceptable
C-	1.67	
D+	1.33	
D	1.00	Poor
F	0.00	Failure
I	0.00	In Progress
P	0.00	Pass
W	0.00	Withdrawn
AU	0.00	Audit (non-credit)

The grade of I indicates incomplete course work due to circumstances beyond the student’s control. The Registrar shall change the grade of I to F if the incomplete is not removed within the succeeding semester, unless the instructor grants an extension of the time period for completing the unfinished work.

Calculating the Grade Point Average (GPA)

Only credits attempted at Alfred University which have received final grades of A through F shall be used to calculate GPA. (The grades I, IP, P, W, and AU are not used in calculation of GPA.) The Term GPA is calculated by dividing the total grade points (or “quality points”) earned by the “GPA Hours” for a given term. The Overall (or “Cumulative”) grade point average is calculated by dividing total grade points earned to date by total GPA hours to date. The credit hours for courses passed (those with grades of P or letter grades of D or above) will be counted as credit earned. Grades of I, IP, W, F and AU (audit) do not earn credit. To calculate a projected GPA if certain grades are earned, see the GPA Calculator on the Registrar web page.

Pass/Fail Grading

1. Undergraduate students may designate up to four semester hours each semester to be taken for a grade of P or F provided they have not been previously enrolled in the course and the course is not a required course in their major program. Grades of D or better will be recorded as P. Advisor approval is required. The periods for selecting and canceling the Pass/Fail option are designated in the Academic Calendar. These additional limitations apply:
    - Students in the College of Liberal Arts and Sciences may not take courses that fulfill major, minor, or General Education requirements on a Pass/Fail basis
    - Students in the College of Business may not take courses that fulfill major requirements, or liberal arts credits for the BS degree, or requirements for the minor, on a Pass/Fail basis
    - Students in the Inamori School of Engineering may not use the Pass-Fail grading system for any course presented for graduation credits, except in the following instances: Co-op, off-campus study, and ENGR 160/360 Seminar
2. Certain courses may be designated by the college curriculum committees to be graded only Pass or Fail.

Auditing of Courses

A student may elect to take a course on a non-credit or “audit” basis. The student may also change from credit to audit or vice-versa until the last day to withdraw from the course as designated in the Academic Calendar. An auditor receives a grade of “AU” in the course, and this is recorded on the transcript. Courses audited are charged at 50% of the normal tuition rate.

Any student registering as an auditor in a class must consult the instructor to determine the level of participation the instructor expects of an auditor. If an auditing student fails to meet the expected level of participation, the instructor will notify the Registrar when final grades are submitted, and the Registrar will cancel the student’s audit registration in that class.

Repeating of Courses

When a course is repeated, the course credits shall be used only once and the grade points and credits corresponding to the most recent grade earned shall be used in calculating the cumulative GPA. While the original grade is no longer used in the GPA,

it remains a part of the record and it appears on the student's transcript. If a course cannot be repeated because it is no longer offered, a course with similar content may, with permission of the Dean, be taken in place of the original and recorded as a repeat.

Grade Changes

All grade changes must be completed prior to the Registrar's certification of graduation. Assigning course grades at Alfred University is the exclusive responsibility of course instructors. Nothing in this policy shall be construed to limit the ability of the Registrar to change grades of incomplete (I) to fail (F) in accordance with the policy on grades of "Incomplete." Nothing in this policy shall be construed as substituting or supplanting rules, regulations, or procedures contained in the policy on Academic Dishonesty.

- A grade may be changed by the instructor of a course to convert an Incomplete or IP to a final grade.
- A grade may be changed by the instructor of a course to correct an error. The Division/Program Chair and appropriate Dean must be notified of all grade changes in writing (stating reason(s) for the change) except for completion of work in courses graded I or IP.
- Once assigned, only the course instructor can change a course grade, except in rare circumstances when the course instructor's supervising Dean may change a grade. (See Appendix B in the Undergraduate Academic Regulations on for specific information on the circumstances under which a Dean may change a grade.)

Petition for Change of Grade

Students have one year from the date a final grade is issued to petition for a change of grade. A student who believes a final grade is not correct should first meet with the instructor who assigned the grade. If the matter is not resolved, the student should meet with the Division/Program Chairperson in the academic area offering the course in question. If there is no resolution, the student should arrange a meeting with the Dean, or the Dean's designee, of the College or School offering the course.

If there is still no resolution, the student may appeal the decision of the faculty member to the Ombuds Officer. Should a request for an appeal be made to the Ombuds Officer, an appeals committee will be assembled. The appeals committee will be constituted by the Ombuds Officer, within 14 semester days. Membership of the appeals committee shall include one student, to come from the University Student Grievance Committee, and two full-time tenured faculty. If the Student Senate has not appointed members of the Student Grievance Committee, or if those members stand in a conflict of interest with the petitioning student, the Ombuds Officer may select any full-time senior for this purpose.

The appeals committee should meet as soon as possible after members of the committee have been selected. The appeals committee will review the case and prepare a written recommendation to be forwarded to the Provost. The Provost will make the final decision within seven semester days and officially notify, in writing, the student, the instructor(s) and Dean involved in the case.

The student may bring one other student or employee from Alfred University to the appeals committee hearing. Only members of the university community shall be permitted to attend the hearing. The invited other person shall not have the right to

speak or otherwise participate in the hearing. No sound or video recording of the appeal committee hearing shall be permitted. All testimony given at the hearing shall be considered confidential except for communication to appropriate university faculty and administrators.

Transfer of Credit

Undergraduate students must complete at least 45 credit hours in residence at Alfred University. “In residence” means courses offered by Alfred University on campus, at an extension site, or through distance education. Students must complete their final 30 semester credit hours in residence. Students who have met the 45 hour residency requirement and who are approved for study abroad in the second to last semester before graduation are exempt from the requirement to be in residence for the final 30 credit hours, but must be in residence in the final semester. Students who have met the 45 credit hour residency requirement and who need no more than eight semester credit hours to complete degree requirements may petition the Dean for permission to complete the remaining requirements elsewhere.

For credits to be transferred toward the AU degree, final, official transcripts from previous institutions must be received by the Office of the Registrar within one year of admission to AU as a degree-seeking student or within one year of an approved study away program.

When applying for admission to Alfred University, send official transcripts to:

Office of Admissions
Alfred University
1 Saxon Drive, Alumni Hall
Alfred, NY 14802

Once admitted to AU, send official transcripts and any other academic records to:

Registrar
Alfred University
1 Saxon Drive
Alfred, NY 14802

Transferable Credit

Alfred University accepts transfer credits from those U.S. colleges and universities that are accredited by one of the regional accrediting bodies, such as the Middle States Commission on Higher Education. Credits earned at U.S. institutions that are accredited instead by one of the recognized national accrediting organizations, such as the Accrediting Council for Independent Colleges and Schools, will be considered for transfer of credit on a case-by-case basis

Transfer credits from institutions outside the U.S. are considered on a case-by-case basis after the credential has first been evaluated by a recognized agency specializing in evaluation of international transcripts, such as World Education Services. (Evaluation

by an outside agency is not required for transcripts issued by Canadian institutions.) Also considered are transfer credits for military training and education as recommended by the American Council on Education (additional information follows).

Only courses comparable to the types of courses offered at Alfred University are considered for transfer. Examples of coursework not acceptable are courses in vocational fields or those considered to be technical training. Mathematics courses below college algebra are not accepted. The coursework must be appropriate and applicable to some component of an AU bachelor's degree program, including general electives.

In courses graded A-F, only those courses in which the student has earned a "C" or above will be accepted. In courses graded pass/fail or credit/no credit, grades of "pass" and "credit" are accepted.

Grades received in courses taken at other institutions are not included in the calculation of the overall Alfred University GPA, so it is not possible to replace a grade earned at AU with a grade earned in an equivalent course taken elsewhere. Further, if a student repeats at Alfred University a course equivalent to one previously transferred, the grade and credits from the AU course are used in the calculation of GPA and total credit hours. The credit that had been transferred is excluded and no longer counts as credit earned.

Transfer credit evaluations are made under the direction of the Dean of the college in which the student is enrolled or wishes to enroll. The Registrar's Office posts the transfer credit to the student's record.

Once admitted to AU, a student must have the permission of the Dean in advance to take courses at another institution and to transfer this credit back to Alfred University. Petition forms to take courses elsewhere after admission to AU are available in the Student Service Center in Seidlin Hall.

Number of Credits Transferable

The maximum number of semester credit hours transferable toward any Alfred University degree program from all sources combined is 75, to include credit from other institutions, credit as recommended by the American Council on Education, and credit from standardized exams (see below). The 75-credit-hour maximum applies to transfer credit earned both before and after admission to an AU degree program.

Veteran & Military Service Transfer Credits

DANTES (DSST)
DSST standardized exams are considered on a case by case basis for transfer credit. Exam results are compared with national norms to determine credit and/or advanced placement.

ACE
The American Council of Education (ACE) provides transcript evaluations for military trainings. Upon receiving an official military transcript, military trainings can be evaluated for possible credit towards one's degree. This will be determined on a case by case basis. A service member can request their military transcript using online: Army, Navy, Marine Corps, Coast Guard or Air Force.

CLEP

The College Level Examination Program (CLEP) of the College Entrance Examination Board. Only the CLEP subject exams taken prior to admission are considered for credit toward the degree (See the CLEP Equivalencies chart). Students who wish to take a CLEP Exam for credit after being admitted to a degree program at AU must receive permission in advance from the Dean of their college or school.

Veteran & Military Services Tuition-Related Policies

Military-Affiliated Student Tuition & Fee Deferral Policy

Alfred University will allow military-affiliated students with VA, DoD, and/or New York State Military/Veteran tuition and/or fees educational benefits to attend a course of education for up to 90 days from the date the beneficiary provides one of the following:

- Certificate of Eligibility
- Statement of Benefits
- Approved DoD Tuition Assistance Voucher
- Listed on the NYS RIRP Approved Roster
- Valid VA Form 28-1905.
- Other related approved military-affiliated educational benefit's verification document

This allows a student to attend the course(s) until VA, DoD, and/or New York State provides payment to the institution. NOTE: Extension to 90-day deferral will be granted to students upon delay of payment beyond 90 days.

In accordance with the Veterans Benefits and Transition Act of 2018 (38 USC 3679), Alfred University will not impose a penalty (e.g., loss of access to Canvas, meal plan, late fee, etc…), additional cost (processing fees), or require the beneficiary to borrow additional funds to cover tuition and fees due to late payment from the VA, DoD, and/or New York State.

Definitions

- DoD – Department of Defense
- VA – Department of Veteran Affairs
- RIRP – Recruitment Incentive & Retention Program

Return of Federal Tuition Assistance

Military Tuition Assistance (TA) is awarded to a student under the assumption that the student will attend school for the entire period for which the assistance is awarded. When a student withdraws, the student may no longer be eligible for the full amount of TA funds originally awarded.

To comply with Department of Defense policy Alfred University will return any unearned TA funds on a prorated basis through the 60% portion for which the funds were provided. TA funds are earned proportionally during an enrollment period, with unearned funds returned based upon when a student stops attending. These funds are returned to the military service branch.

Return of Federal Military & Veteran Educational Benefits

When a serving service member, veteran, spouse, or other family member (dependent), using their well-earned Federal military and veterans educational benefits is to withdraw

from the university their student aid will prorated in accordance with section 2(f) of Executive Order 13607 (Principles of Excellence).

Executive Order 13607 (Principles of Excellence) Section 2(f): agree to an institutional refund policy that is aligned with the refund of unearned student aid rules applicable to Federal student aid provided through the Department of Education under Title IV of the Higher Education Act of 1965, as required under section 484B of that Act when students withdraw prior to course completion.

For withdrawals due to military service obligations, please see Alfred University Leave of Absence policy.

Veterans & Military Services Financial Aid

Prospective Military Students and/or Dependents

The following websites contain information on resources, aid options, default rates, graduation rates and provide comparative school costs so that prospective students can make informed decisions about where to attend school.

1. The College Scorecard is a planning tool and resource to assist prospective students and their families as they evaluate options in selecting a school.
2. The College Navigator is a consumer tool that provides school information to include tuition and fees, retention and graduation rates, use of financial aid, student loan default rates and features a cost calculator and school comparison tool.
3. The College Financing Plan (formerly, Financial Aid Shopping Sheet) is a model aid award letter designed to simplify the information that prospective students receive about costs and financial aid so they can easily compare institutions and make informed decisions about where to attend school.
4. Paying for College can be used by prospective students to enter the names of up to three schools and receive detailed financial information on each one and to enter actual financial aid award information.
5. Our University's Student Financial Services website details how to apply for all types of aid including Title IV.

Private Loans

Service members and non-service members alike may first want to contact any financial aid advisor staff before considering private loan aid so they have a clear understanding of all other available financial aid (State and Federal Title IV). Loans have to be repaid and private loans generally cost more in the long run and do not offer forgiveness options, etc.

The institution's Cohost Default Rate/ Repayment Rate percent of student borrowers and comparison to national averages is available on the College Financing Plan after filing the FAFSA and on the Federal College Navigator website.

Credit by Standardized Exams

To encourage students with outstanding ability and enterprise, Alfred University places special emphasis on advanced placement and other exams that assess college-level learning that occurred outside of the traditional college classroom setting.

Through these examination programs, students may earn appropriate credit for courses at any level where college-level learning can be demonstrated. AU recognizes these programs:

- The **Advanced Placement** Program of the College Entrance Examination Board (AP). (For a list of scores accepted and corresponding transfer credit given at AU, see the AP Credit equivalencies chart.)
- The **International Baccalaureate** Program (IB). Alfred University will grant 30 semester hours of credit (sophomore standing) to students who have earned the International Baccalaureate diploma in high school. Students who have not completed the diploma will be awarded equivalent credit up to two introductory courses for each IB exam, depending on level of the exam and the score achieved. (For a list of scores accepted and corresponding credit awarded, see the IB Equivalencies chart.)
- The **College Level Examination Program** of the College Entrance Examination Board (CLEP). Only the CLEP subject exams taken prior to admission are considered for credit toward the degree. (See the CLEP Equivalencies chart.) Students who wish to take a CLEP Exam for credit after being admitted to a degree program at AU must receive permission in advance from the Dean of their college or school.

Credits awarded from AP, IB, CLEP or from any other standardized exam program are considered to be transfer credits. They count toward the 75 credit hour limit on total transfer credit, and they do not affect the AU GPA.

Credits from standardized exams are evaluated separately by Alfred University from original score reports only, not from the transcript of another college or university. Students are responsible to make sure official score reports are received in the Office of the Registrar within one year of admission to AU as a degree-seeking student. Scores received after this time cannot be counted as credit toward the degree.

Alfred University Challenge Exams

Currently enrolled degree-seeking students may request a challenge examination for any undergraduate course which has not already been taken at Alfred University. (If any grade other than a “W” has been recorded at AU, the course cannot be challenged.)

Students cannot take a challenge exam for any course that is a prerequisite for or a lower-level course for which they have already received credit. The student’s Dean determines if an eligible course is appropriate for completion through a challenge examination.

Credits earned through an AU Challenge Exam are considered to be institutional credit, not “transfer credit”, so these credits do not count toward the 75 credit hour limit on transfer credit. If the exam is passed, the credit from a challenge exam is posted to the transcript with a grade of “CH”, indicating the course was successfully challenged. Credits earned by challenge exam do not affect the AU GPA. Petition forms for Challenge Exams are available at the Student Service Center in Seidlin Hall.

Academic Standing

The Scholastic Standards Committee of each college or school will serve as the approving authority for student academic standing. The Committee will be composed of the Dean, as chairperson, faculty representatives, a Student Affairs representative, and the Registrar. Student representatives may be added at the discretion of the college/ school.

Definitions

- **Good Standing:** Meeting or exceeding the minimum requirements for satisfactory progress toward the degree.
- **Academic Probation:** Studies at the University may continue, but a probation contract may be required by the Dean and there may be limitations on credit load.
- **Academic Suspension:** Studies at the University are interrupted for at least one full semester. The permission of the Dean of the College/School that suspended the student is required in order for the student to resume studies at AU. The Dean may require that specific conditions be met before permission to return will be considered.
    - Potential transfer credit while away from AU may or may not be allowed. Students who do not resume studies at the end of the period of Academic Suspension are withdrawn from the University and must be readmitted to the University in order to resume studies in the future.
- **Academic Dismissal:** Separation from the University due to serious, prolonged academic deficiency as evidenced by consistently low grades and, usually, repeated Academic Probation or Suspension. After a period of at least 2 years an application for readmission to the University may be considered on a case-by-case basis.

In the College of Liberal Arts and Sciences, in Performing Arts and in the Inamori School of Engineering, the minimum term and cumulative (overall) Grade Point Average to remain in Good Standing is 2.0 regardless of the number of credits attempted. In the School of Art and Design, the minimum requirements are as follows:

Number of Credits Attempted*	**Minimum GPA**
0-35	1.70
36 or more	2.00

***"Credits Attempted" include transfer credits and all credits earned at AU, as well as the credits for withdrawn courses and courses with grades of “In Progress” (IP) or “Incomplete” (I). Only Audited courses are excluded.**

- A student whose term or cumulative GPA drops below the level established, or who is not satisfying requirements towards a degree, will be placed on Academic Probation or may be Academically Suspended or Dismissed.
- A student on Academic Probation who fails to attain the minimum term and cumulative GPA’s for a second consecutive semester may be placed on Extended Academic Probation or on Academic Suspension, or may be Dismissed.
- A student with multiple semesters on Academic Probation or Extended Academic Probation, whether or not the semesters are consecutive, may be Academically Suspended or Dismissed.

- Students with a term or cumulative GPA below 1.00 are subject to Academic Suspension or Dismissal regardless of their prior academic standing.
- A student who is eligible for Academic Suspension a second time or who would be on Academic Probation or Extended Academic Probation for a third consecutive semester may be Academically Dismissed. A student eligible for a third Academic Suspension will be Dismissed from the University.
- Students may appeal their Suspension or Dismissal through the Dean for presentation to the Scholastic Standards Committee of the College or School that placed academic sanctions on the student.

Academic Honors

A full-time degree-seeking student in good academic standing who earns at least a 3.5 grade point average for a Fall or Spring semester with 12 or more GPA hours, no letter grade below C-, and no grade of Incomplete (I) is placed on the Dean's List in his or her school or college for that semester. Notation of the award is made on the student's official transcript.

Graduation Honors

Honors in the Field of Specialization

Although specific requirements are determined by the faculty in the academic area offering the major, general requirements for honors candidates have been adopted by the faculty. Candidates for this honor shall have:

- attained a cumulative GPA of 3.30 in the courses of their field of specialization
- earned at least two semester hours of credit in independent study (may be waived by the major area faculty)
- passed an oral examination in the major and allied fields, conducted by a committee selected by the major faculty

Overall Honors

Sometimes called “Latin Honors”, three grades of honors are awarded to graduating seniors based on their cumulative scholarship attainment as evaluated upon completion of all requirements for the bachelor's degree. In order to be eligible for these honors, a senior must have earned a minimum of sixty credit hours at Alfred University (“Passed Hours”) with at least fifty “GPA Hours.”

- Summa cum laude, or highest honors - GPA of 3.90 and no grade below B
- Magna cum laude, or high honors - GPA of 3.70 and no grade below C
- Cum laude, or honors - GPA of 3.30

Alfred University Scholar

Students in the University Honors Program who earn at least a 3.20 cumulative GPA, successfully complete four Honors seminars, and write and defend an Honors Thesis, graduate with the designation “Alfred University Scholar.”

Top Undergraduate Honors

The highest ranked graduating student in each undergraduate college or school will be selected by the Registrar using the following guidelines:

- a minimum of 60 “GPA Hours”
- grades received in all courses transferred to AU will be included in the calculation of a student’s “honors GPA” for this purpose only
- double degree students may be honored for their work in either college or school

The top undergraduate students are seated on the Commencement platform and are recognized during the ceremony.

Prizes and Awards

In addition to the academic honors formally attained for outstanding scholarship, a number of prizes and awards are sponsored by individuals and organizations. These special and commemorative awards are presented annually during Honors Convocation.

Honor Societies

The following are University Honor Societies in various disciplines:

- Alpha Iota Delta – Decision Sciences
- Beta Gamma Sigma – Accredited Business Schools
- Delta Mu Delta – Business Admin.
- Keramos – Ceramic Engineering
- Mu Kappa Tau – Marketing
- Omicron Delta Upsilon – Economics
- Pacioli Society – Accounting
- Phi Alpha Theta – History
- Phi Beta Kappa – Liberal Arts
- Phi Kappa Phi – University-wide
- Phi Sigma Iota – International Languages
- Pi Gamma Mu – Social Sciences
- Pi Sigma Alpha – Political Science
- Psi Chi – Psychology
- Sigma Xi – Scientific Research
- Tau Beta Pi – Engineering

Academic Dishonesty (Unethical Practices)

We, the students of Alfred University, will maintain an academic and social environment which is distinguished by honesty, integrity, understanding, and respect. Every student is expected to uphold these ideals and confront anyone who does not. Keeping these ideals in mind, we, the students, aspire to live, interact and learn from one another in ways that ensure both personal freedom and community standards. Student Senate Committee on Academic Affairs – April 2, 1997.

Definition

Unethical conduct or academic dishonesty is defined as any action that enables students to receive credit for work that is not their own. Such conduct will not be tolerated in any form. Academic dishonesty can occur both in and outside the classroom, studio, or lab. This might involve venues as varied as student publications, art exhibits, and public presentations.

In the context of tests, quizzes, examinations, or other in-class work, dishonest practices include but are not limited to:

- Marking an answer sheet in a way designed to deceive the person correcting it.
- Possession of unauthorized material that could be used during a quiz, test, or examination for the purposes of cheating.
- The unauthorized use of books or notes during a quiz, test, or examination.
- The hiding or positioning of notes or other tools for the purposes of cheating on a quiz, test, or examination.
- Unauthorized possession or knowledge of any examination prior to its administration.
- Looking at someone else's quiz, test, or examination without the express permission of the instructor.
- Any form of unauthorized communication during a quiz, test, or examination. This includes use of any electronic communication devices without the consent of the instructor. Such devices include--but are not limited to-- cellular phones, Bluetooth, computer internet, recording devices, and PDA, CD and MP3 players.

In the context of writing assignments, research projects, lab reports, and other academic work completed outside the classroom, dishonest practices, commonly referred to as plagiarism, include but are not limited to:

- Lack of adequate and appropriate citation of all sources used.
- The appropriation of another’s ideas, analysis, or actual words without necessary and adequate source citations, either deliberately or inadvertently.
- The copying, purchase, or other appropriation of another person’s academic work with the intention of passing it off as one’s own original production.
- The creation of a document by more than one student that is then submitted to the instructor as the original creation of only one student, without the express permission of the instructor.
- Submitting the same piece of work to more than one instructor without the express permission of all instructors involved.

Guidelines for Avoiding Dishonest Behavior

The following guidelines are included to assist students in avoiding dishonest behavior in their academic work, particularly in writing assignments, research projects, and lab reports.

1. Students’ written work should reflect their own personal preparation for the assignment, such as reading books and articles, performing research on the internet and in electronic databases, and taking notes in class and during the research process.

2. Students should avoid using the actual words of the authors of their sources whenever possible, opting instead to demonstrate an understanding of the authors' ideas by rewriting them in their own words.
3. All ideas and analyses that are derived from other authors must be attributed to those authors in the form of appropriate source citations, even when their own words are not used. Source citations usually take the form of footnotes, endnotes, or parenthetical citations in addition to a formal bibliography and/or works cited page at the end of the writing assignment. The format for these source citations depends on the conventions of each academic discipline: consult your instructor as to the appropriate form to use.
4. When the use of an author's specific text is unavoidable or necessary, that material must be identified as a direct quotation and must either be surrounded by quotation marks or formatted as a block quotation. Appropriate source citations must follow all quotations, as per the instructions above.
5. Circumstances when direct quotation is necessary or desirable include: when the wording of the text is essential to the student's own analysis; when the text exemplifies the author's particular perspective; when quoting the text is a more efficient way of presenting the author's ideas than a more elaborate and lengthy paraphrase would be. It should be noted that lengthy quotations and/or their overuse is neither desirable nor appropriate in most instances and should be avoided. Additionally, overreliance on lengthy quotations can be considered a form of plagiarism.
6. Some instructors find collaborative assignments useful. Students may be allowed to collaborate in shared assignments only with the specific permission of the instructor. In those circumstances the limits to the collaboration will be established by the instructor and students should be aware that they are responsible for maintaining the appropriate limits to that collaboration.

Procedures

First Offense

If academic dishonesty is suspected, the following procedures should be followed:

- Before a formal charge of academic dishonesty is made, the instructor is strongly encouraged to have his or her department chair or, if that department chair is deemed inappropriate or impractical, another colleague or administrator, review the alleged infraction.
- Within seven semester days after the infraction is observed or verified, the instructor shall advise the student orally, if possible, and by email that the student has (or may have) committed an act of academic dishonesty. This will allow simple misunderstandings and misinterpretations to be resolved. A semester day is defined as a day when the university is in session and classes/exams are held.
- If the instructor remains convinced that an offense has occurred, a written statement of the offense will be sent to the student by email and also by regular mail. The statement will include whatever penalty the instructor considers appropriate. For offenses categorized as Tier One (see below), a copy will be sent to the instructor's dean, the student's dean, and the Provost. This letter should

include a reference to this section of these regulations to inform students of their rights and the procedures to be followed if an appeal is needed.

- The penalties assessed may range from non-grade penalties to failure in the course.
- Infractions shall be categorized as Tier One (major) or Tier Two (other).
    - Tier One infractions shall be reported to the student's dean and the Provost. A second Tier One infraction will result in dismissal from the university. Tier One offenses include (but are not limited to) the following: plagiarism, submission of a commercially-derived term or research paper or report or art presentation, use of a research paper or report prepared by another person without the instructor's permission, producing a research paper or report for another student without the instructor's permission, cheating on an examination or quiz, aiding and abetting academic dishonesty, falsification of grades or records, unauthorized viewing or altering of academic or administrative records, gaining an unauthorized or unfair advantage on academic assignments (including preventing other students from fair access to academic materials), buying or selling assignments or examinations.
    - Tier Two infractions are generally considered less serious than Tier One offenses. They need not be reported to the Provost and the dean(s). Examples of Tier Two infractions include attendance-related dishonesty or submission of assignments to two or more classes with the instructor's permission. If an instructor is uncertain about categorizing an infraction as Tier One or Tier Two, he/she shall make a determination in consultation with a department chair or, if the chair is a party to the case or is otherwise unavailable, the dean or assistant dean of the college.
- The academic dean of the student's college should advise the student of appeal procedures that are available.

Following a Charge of Academic Dishonesty

1. A student charged with an unethical practice may accept the judgment and penalty assessed by the instructor.
2. A student charged with an unethical practice may appeal in writing directly to the instructor who assessed the penalty within fourteen (14) semester days after the instructor sends email and written notification of the offense and penalty to the student. The fourteen semester day period is not dependent on proof that the student has read the instructor's email or written notification.
3. If the penalty is modified to one acceptable to both student and instructor, the appropriate academic deans and the Provost will be notified of the change.
4. If the instructor will not modify the penalty, the student may present the case to the Ombuds Officer.
5. In the event the matter is not resolved in a manner satisfactory to all parties through the Ombuds Officer's review, the Ombuds Officer may at his/her own initiative, or shall at the student's request, refer the matter to an appeals committee. A student request for appeals committee consideration of the matter must be made to the Ombuds Officer within fourteen (14) semester days after the Ombuds Officer notifies the student orally, by email, or in writing, that the Ombuds Officer has been unable to resolve the matter.

6. The appeals committee will be constituted by the Ombuds Officer within 14 semester days. Membership of the appeals committee shall include one student, to come from the University Student Grievance Committee, and two full-time and/or tenured faculty. If the Student Senate has not appointed members of the Student Grievance Committee, or if those members stand in a conflict of interest with the student accused of the infraction, the Ombuds Officer may select any full-time senior student for this purpose. The appeals committee should meet as soon as possible after members of the committee have been selected. The appeals committee will review the case and prepare a written recommendation, to be forwarded to the student, the instructor(s) involved in the case, the student's academic dean, and the provost within seven semester days once the appeal committee has come to a recommendation.
7. The instructor, the appropriate departmental/divisional head (if he/she is not a party to the case), and the instructor's dean (if he/she is not a party to the case) will consider the recommendation and notify the student, the student's Academic Dean, and the Provost of their final decision.
8. The student may bring one other student or employee from Alfred University to the appeals committee hearing, but no person not a member of the university community shall be permitted to attend the hearing. The invited other person shall not have the right to speak or otherwise participate in the hearing. No sound or video recording of the appeal committee hearing shall be permitted.
9. If the student is subject to more than one charge of academic dishonesty in a single class and the student requests an appeal committee hearing, all charges shall be considered together in a single hearing.
10. All testimony given at the hearing shall be considered confidential except for communication to appropriate university faculty and administrators.
11. If the appeals committee judges that the student is not guilty of academic dishonesty and the instructor who made the initial charge accepts the recommendation of the committee, all written records pertaining to the matter will be destroyed.

Second Offense

Notification and appeal procedures regarding second infractions are identical to those for an initial infraction.

1. A student found guilty of a second major infraction will be dismissed from the university within fourteen (14) semester days, unless the student appeals the charge.
2. In unusual cases, the Provost has the right to dismiss a student who has committed more than one minor infraction from the university, to be determined by the Provost in consultation with the appropriate dean(s).
3. If the instructor chooses not to drop the charge and the student wishes to appeal the second offense, the Provost will transmit the appeal to the Ombuds Officer for an appropriate appeals committee review and recommendation for action to the Provost. If the review and recommendation confirms that the second offense is a major infraction and that the instructor's action is warranted, the student will be dismissed from the University immediately.
4. In the case of a senior who plans to graduate at the end of the semester in which the second offense occurs, the appeals committee review should be conducted as

soon as practical. If the date of the commencement ceremony makes the appeals committee meeting impractical, then the Provost, together with the student's dean, shall have the authority to dismiss the student prior to the commencement ceremony.

Notification

Regarding all cases that fall under the purview "Second Offense", the Provost will notify the instructor(s) and student of a final decision.

When more than one college is involved (for instance, if a student from one college is charged with an infraction by an instructor in another college), the Provost shall inform all appropriate deans or program directors of the events and penalties.

Records

All reports and documents pertaining to each case, including faculty charges, student appeals, and appeal-committee records, along with written responses from the Provost's Office, will be filed with the Vice-President of Student Affairs. Where practical, electronic copies of this information shall be sent to the Provost.

All such information is subject to regulations regarding disposal of records and release of information mandated by Alfred University and/or found in the Family Educational Rights and Privacy Act (FERPA), or as mandated by any other controlling legal authority.

Graduation Rate

The graduation rate tracks the progress of students who began their studies as full-time, first-time degree-seeking students to determine if they earn a degree within 150% of "normal time" for completing the program in which they are enrolled.

In the Fall Semester of 2015, there were 454 full-time, first-time degree-seeking undergraduate students enrolled at AU. After 6 years (as of June 16, 2021), 272 of these students (60%) had graduated from Alfred University. Additional information on AU's graduation and retention rates can be found on College Navigator.

University Academic Program

The University baccalaureate program is designed to be accomplished in eight semesters of 15 weeks each (inclusive of final exams).

The typical academic load of full time students at Alfred University is 16-18 credit hours per semester.

- Most courses meet for 1 (50-minute) hour per week for each semester credit hour, or the equivalent
- Courses with labs typically meet for 2 to 3 hours per week of class time plus 2 to 3 hours per week of lab time
- Art studios meet 1.5 to 2 hours per week for each credit hour

On a weekly basis, students should expect to spend a minimum of two hours outside of class studying and completing assignments for each hour spent in class (three hours

per week outside of class for each hour in class for art studios); which is a minimum of 45 hours of total learning time per credit hour for the term. Students taking an online course should, likewise, expect to spend about 45 hours of total learning time per credit hour in a term; the same amount of time as in a traditional, on-campus course.

The Registrar and the Deans review the class schedule each semester and review at least annually courses and programs as published in our catalogs in order to ensure compliance with credit hour requirements.

Enrollment Status

Full-time student: Currently registered for 12 or more semester credit hours.

Part-time student: Currently registered for fewer than 12 semester credit hours.

Student Classification

Class Standing (based on semester credit hours earned)

- First-Year 0-29
- Sophomore 30-59
- Junior 60-89
- Senior 90+

School of Art and Design

The School of Art and Design offers three Professional Degree Programs:

- The Bachelor of Fine Arts (BFA)
- The Bachelor of Science in Art History and Theory (BS)
- The Master of Fine Arts (MFA) in four Areas:
    - Ceramic Art
    - Electronic Integrated Art
    - Painting
    - Sculpture/Dimensional Studies

Bachelor of Fine Arts (BFA)

The BFA degree provides opportunities for undergraduate students to study ceramic art, drawing, painting, photography, graphic design, print media, video, sonic art, interactive media, or glass and sculpture within an open curriculum. This 4-year professional program develops a significant commitment to studio practice and fosters the conceptual and technical skills necessary to pursue a career in the arts.

BFA students take elective and academic credit from the College of Liberal Arts and Sciences, the College of Business, the Inamori School of Engineering and the Performing Arts Division. There are numerous options for art students who want to pursue academic minors such as arts management, art education with teacher certification, environmental studies, performing arts, and philosophy, to name a few.

Foundations

Foundations at Alfred is an intensive first-year immersive that equips students with a foundational understanding and beginning command of the elements and principles of art and design (2-D, 3-D, 4-D). Through diverse media, conceptual thinking, and communication skills to articulate the strategy and references, students engage in an environment that encourages experimentation, collaboration, community, and personal expression. A faculty team provides a learning environment that fosters research, practice, and reflection-including conscientious citizenship. It prepares students to make informed, intelligent decisions about the studio's community and the outside world.

The foundations program provides students with a knowledge of essential elements and art-making skills while challenging preconceived notions of art and the creative process. Throughout each of the foundations studio courses, students are encouraged to broaden their visions and find linkages between the methods, material, and content.

Throughout the year, all Foundations students meet collectively once a week on Wednesday mornings for Visiting Artists' talks, films, discussions, and group projects.

In addition to the Foundations studio courses in the first year, students complete 6 credits of art history by taking three 2- credit courses in non-western art, ancient to baroque art, and modern to contemporary art. First-year students also fulfill academic requirements in writing and humanities.

Sophomore Year

The sophomore curriculum is designed to build upon the Foundations year's studio experience through the introduction to specific studio areas, all of which support the "high tech, high touch" vision of the school. The curriculum encourages the study of studio disciplines represented across four Divisions - Ceramic Art; Expanded Media; Painting, Drawing and Photography; and Sculpture/ Dimensional Studies.

Sophomores learn fundamental materials and methods necessary in the development of artistic practice within the mediums. These include awareness and ability to understand, use and integrate processes, tools, materials, and vocabularies. Through inquiry-based research, synthesis, and the use of drawing (one semester is required at the sophomore or junior level), each student learns strategies to realize their ideas through art practice and research. During this year, students choose four studios, one from each division, or to double up in one division to focus as they wish. This allows those who want to focus in a specific division to do so while allowing others to have a more diverse studio experience. Both options are meant to prepare students for the challenges of the junior and senior curriculum.

The sophomore art history requirement, *Art in Our Time*, provides a stimulating and integrated context to the studio experience. Students also extend their academic experience by choosing elective courses from other schools and colleges at Alfred University.

Junior Year

Students entering the junior year have the latitude and ability to define their interests and creative goals. Students naturally become more focused, integrating conceptual and technical skills while developing a personal vision in their art-making. At the junior level, academic and elective course work fosters interest in the cross-disciplinary practice and undergraduate research possibilities.
The junior year is also the time for students to take advantage of study abroad opportunities. The School of Art and Design has several exchange programs, including agreements with the University for the Creative Arts at Farnham, England, Edinburgh College of Art in Scotland, Fachhochschule Koblenz University of Applied Sciences in Germany, the Central Academy of Fine Art in Beijing, China, and the University of Sydney and the University of New South Wales in Australia.

Senior Year

Seniors work semi-independently in their own studio spaces and are required to meet weekly with two faculty advisors (instructors) to discuss their work, research and process. Additionally, seniors participate in seminars, visiting artists programs, group critiques, discussions and exhibitions. Seniors develop and produce a consistent body of work, which draws on their individual experiences, acquired skills and personal vision. The culmination of the BFA degree is the senior thesis exhibition. During the final two weeks of the academic year, the School of Art and Design is transformed into quality exhibition space where graduating seniors display their thesis work. The

momentum gained during the senior year prepares graduates to enter the workforce as highly motivated artists and designers, and as accomplished technicians.

BFA Degree Requirements

Students who enroll in the School of Art and Design must complete the requirements listed below to receive the BFA degree:

Studio - 72 Credits
*Academic Requirement - 25 Credits
Art History - 17 Credits
Electives - 14 Credits
Senior Project - 0 Credits

Total credit hours - 128
Students must also complete:
The University Global Perspective requirement
The University **Common Ground** requirement
The University Lifetime Health & Wellness requirement

The Global Perspective credits can be applied by registering for an academic or Art History course with a Global Perspective attribute. If a student completes the activity portion of the University Lifetime Health & Wellness requirement by taking one PFIT course (1 credit), the total number of credits to graduate to 131; if a student completes the activity portion with a two-credit, the total number of credits to graduate is 132. Designated Dance courses can count for PFIT while also fulfilling an elective/academic credit.

Note: additional PFIT activity credits (100-level PFIT, EQUS) may not be used toward any degree requirements

***Academic Requirement (25 credit hours)**
This requirement is met by completing the 4 credits of Writing and 8 credits of Humanities plus enough additional academic courses to reach the minimum of 25 credits. This requirement is outlined below under the headings Writing, Humanities, and Academic Requirements.

Writing Requirement (4 credit hours)
Each student must complete one semester of college writing (ENGL 101 or ENGL 102). Students will be placed in the appropriate level course depending upon their scores on college entrance exams. (See placement scores.)

Humanities Requirement (8 credit hours)
At least one 4-credit course must be taken from among the 100 or 200 level offerings from (area B, Philosophy or Religious Studies or area D, Historical Studies.) The second course may be taken from either the Humanities or Liberal Arts courses.

Humanities (area B or D)

- HIST 107 The World in the 20th Century (D) (GP)
- HIST 110 The Making of Europe (D)
- HIST 111 Modern Western History (D) (GP)
- HIST 120 The Ancient Mediterranean (D)
- HIST 121 Medieval Cultures (D)
- HIST 151 The Rise and Fall of Iberia 1450-1950 (D)

- HIST 211 American History I (D)
- HIST 212 American History II (D)
- PHIL 101 Introduction to Philosophy (B)
- PHIL 201 Existentialism (B)
- PHIL 281 Ethics (B)
- PHIL 283 Philosophy of the Arts I (B)
- RLGS 105 Introduction to World Religions (B) (GP)
- RLGS 240 Religion in America (B)
- RLGS 251 Who wrote the Bible? (B)
- RLGS 252 Judaism and Islam (B) (GP)
- RLGS 254 Birth of the Christian Tradition (B)
- RLGS 165 Asian Religions (B) (GP)

Liberal Arts (may include area A, Literature.)

- ANTH 110 Cultural Anthropology - 4 Credits
- COMM 110 Mass Media and American Life - 4 Credits
- COMM 220 Understanding Popular Culture and Media - 4 Credits
- DANC 211 Dance History - 4 Credits
- ENGL 211 The Short Story (A)
- ENGL 212 The Novel (A)
- ENGL 213 Introduction to Poetry (A)
- ENGL 214 Introduction to Drama (A)
- ENGL 216 20th Century Poetry (A)
- ENGL 219 British Literature(s) (A)
- ENGL 220 Special Topics in Literature (A)
- ENGL 225 Shakespeare in Cinema (A)
- ENGL 226 The Holocaust and Literature (A)
- ENGL 240 American Literature(s) (A)
- ENGL 243 Southern Storytellers (A)
- ENGL 251 World Literature I (A)
- ENGL 252 Contemporary World Literature (A)
- ENGL/WGST 254 Women Writers (A)
- ENGL/WGST 256 Multicultural American Literature (A)
- ENGL 275 Fiction into Film (A)
- ENGL 278 Middle Ages in Literature and Film (A)
- ENGL 281 Literature and Science (A)
- ENGL 292 Tales of Terror (A)
- ENGL 293 Literature and the Environment (A)
- GLBS 101 Introduction to Global Studies - 4 Credits
- HIST 223
- MUSC 211 World Music - 4 Credits
- POLS 110 American Politics - 4 Credits
- POLS 271 World Politics - 4 Credits
- SOCI 110 Introduction to Sociology - 4 Credits
- THEA 110 Introduction to Theatre - 4 Credits
- THEA 311 Theatre: History, Art, Politics and Society I - 4 Credits
- THEA 312 Theatre History: Art, Politics and Society II - 4 Credits
- WGST 101 Women and Gender in Society - 4 Credits

Academic Electives (13 or more credit hours)
Courses from the following areas count toward this requirement:

- Courses offered by the College of Liberal Arts and Sciences except private music lessons (MUSC 101-108 or 301-308)
- All courses offered by the College of Business
- All courses offered by the Inamori School of Engineering
- All courses offered by the Performing Arts Division
- Art History courses beyond the 17-credit hour requirement
- Honors Seminars

Note: 100-level PFIT and EQUS courses do NOT count as Academic Electives

BFA Degree with Art Education Minor* Requirements

Students who enroll in the School of Art and Design must complete the requirements listed below to receive the BFA degree.

*The Art Education Minor is offered to BFA students through the Division of Education in the College of Liberal Arts and Sciences. The BFA requirements are adjusted as indicated below to account for the Art Ed Minor and Teaching Certification requirements:

Studio - 68 Credits
Art History - 17 Credits
Liberal Arts Core - 19 Credits
Education Core - 31 Credits
Senior Project - 0 Credits

Total credit hours 135

Students must also complete:
The University Global Perspective requirement
The University Lifetime Health & Wellness requirement

The University Global Perspective required credits could be taken within the required academic and/or Art History requirements. If a student completes the University Physical Education Requirement by taking two activity courses, the total number of credits to graduate is 139.

Note: additional PFIT activity credits (100-level PFIT, EQUS) may not be used toward any degree requirements

Academic Requirements and Electives
For BFA students completing the Minor in Art Education, the Academic Requirements and Electives consists of the Liberal Arts Core and the Education Core required of the Minor and to satisfy New York State Education Department guidelines for Teacher Certification. (See the Division of Education description of the Art Education Minor)

Liberal Arts Core (19 credit hours)

- SCIE 117 Integrated Science - 4 Credits **Or**
  SCIE 127 Doing Science - 4 Credits
- ENGL 101 Writing I - 4 Credits **Or**
  ENGL 102 Writing II - 4 Credits

- EDUC 230 Psychological Foundations of Education - 3 Credits

Humanities (area B or D) (take one from the following list) - 4 Credits

- HIST 107 The World in the 20th Century (D) (GP)
- HIST 110 The Making of Europe (D)
- HIST 111 Modern Western History (D) (GP)
- HIST 120 The Ancient Mediterranean (D)
- HIST 121 Medieval Cultures (D)
- HIST 151 The Rise and Fall of Iberia, 1450-1950 (D)
- HIST 211 American History I (D)
- HIST 212 American History II (D)
- PHIL 101 Introduction to Philosophy (B)
- PHIL 201 Existentialism (B)
- PHIL 281 Ethics (B)
- PHIL 283 Philosophy of the Arts I (B)
- RLGS 105 Introduction to World Religions (B) (GP)
- RLGS 240 Religion in American (B)
- RLGS 251 Who wrote the Bible? (B)
- RLGS 252 Judaism and Islam (B) (GP)
- RLGS 254 Birth of the Christian Tradition (B)
- RLGS 165 Asian Religions (B) (GP)

Foreign Language (take one from the following list)

- CHIN 101 Chinese I - 4 Credits
- FREN 101 French I - 4 Credits
- GRMN 101 German I - 4 Credits
- SPAN 101 Spanish I - 4 Credits
- ITAL 101 Italian I - 4 Credits

Education Core (31 credit hours)

- EDUC 231 Social Foundations of Education - 3 Credits
- EDUC 345 Education Fieldwork - 3 Credits
- EDUC 413 Using Literature in Intermediate and Adolescent Classrooms - 3 Credits
  Or
  EDUC 405 Literacy in the Content Area - 3 Credits
- EDUC 463 Student Teaching-Art Education - 12 Credits
- EDUC 464 Seminar in Professional Development: Visual Arts - 3 Credits
- EDUC 491 Methods and Curriculum in Art Education - 3 Credits
- SPED 456 Human Development: Exceptionality - 3 Credits

Typical Program
(Typical 4.5 year, 9-semester program) - First Year

- ART 101 Foundation I - 8 Credits
- **ART 102 Foundations II - 8 Credits
- ARTH 100-level Art History (three 2-credit classes) - 6 Credits

- ENGL 101 or 102 Writing I or II - 4 Credits
- Humanities 100 or 200 level - 4 Credits

Sophomore Year

- **ART 200-level Sophomore Studios - 16 Credits
- ART 282/283/284 Required Drawing (sophomore or junior year) - 4 Credits
- ARTH 211 Art in Our Time (fall only) - 3 Credits
- EDUC 230 Psychological Foundations of Education - 3 Credits
- EDUC 231 Social Foundations of Education - 3 Credits
- Physical Education - 2 Credits

Junior Year

- **ART 300-level Junior Studios - 16 Credits
- ARTH Art History, upper level - 4 Credits
- EDUC 405 Literacy in the Content Area - 3 Credits **Or**
  EDUC 413 Using Literature in Intermediate and Adolescent Classrooms - 3 Credits
- SPED 456 Human Development: Exceptionality - 3 Credits
- SCIE 117 Integrated Science - 4 Credits **Or**
  SCIE 127 Doing Science - 4 Credits

Senior Year

- ** ART 401 Senior Studio - 16 Credits
- ART 499 Senior Show - 0 Credits
- ARTH Art History, upper level - 4 Credits
- EDUC 345 Education Fieldwork - 3 Credits
- EDUC 491 Methods and Curriculum in Art Education - 3 Credits
- Foreign Language - 4 Credits
- Physical Education Activity Course - 2 Credits

Ninth Semester

- EDUC 463 Student Teaching-Art Education - 12 Credits
- EDUC 464 Seminar in Professional Development: Visual Arts - 3 Credits

**Studio courses are assessed a fee for special materials. This fee may vary from $33.00 to $149.00 per credit hour.

Bachelor of Science (BS)

The Bachelor of Science Degree in Art History and Theory (BS)

The B.S. degree in Art History and Theory is a professional degree program based on a curriculum historically developed in conjunction with studio BFA and MFA programs.

It is designed to instill an understanding of artistic developments in Western and global historical contexts, provide students with the critical and theoretical tools necessary for functioning as art professionals, and prepare them for the pursuit of graduate studies in the field. Following this mission, the program intends to educate art historians and theorists whose knowledge of the visual arts is grounded in substantial studio experience and extensive academic learning and research. Therefore, the BS in Art History relies on a combination of fundamental theoretical and applied research in art. The School and the Division of Art History faculty believe in the necessity of anchoring historical and theoretical knowledge with material practice. Consequently, admission to the program requires the submission and review of a portfolio that will assure the candidate's ability to succeed in academic and studio education.

Art History and Theory majors are required to earn a minimum grade of B- for the 300 and 400 level courses in Art History needed to fulfill the required core credits toward the degree major.

BS Degree Requirements

Art/Design History and Supportive Courses: 43 credit hours

- ARTH 120-129 Foundations in Art History (Non-Western) - 2 Credits
- ARTH 130-139 Foundations in Art History (Ancient-Baroque) - 2 Credits
- ARTH 140-149 Foundations in Art History (Modern-Contemporary) - 2 Credits
- ARTH 211 Art in Our Time - 3 Credits
- PHIL 283 Philosophy of the Arts I - 4 Credits
- ARTH 300-level 4 Junior-Level Art History Courses: Non-Western, Ancient to Baroque, Modern to Contemporary - 16 Credits
- ARTH 400-level 2 Senior-Level Art History Courses - 8 Credits
- ARTH 460 Exploring Art History: Concepts, Methods and Practices - 4 Credits
- ARTH 499 B.S. Thesis in Art History and Theory - 2 Credits

Studio: 24 credit hours

- ART 101 and 102 Foundations I and II - 16
- ART 201-279 Two Sophomore-level studios - 8 Credits

General Studies: 16 credit hours

- ENGL 101 and 102 Writing I & II - 8 Credits
- Humanities (as defined under the BFA requirements) - 8 Credits

Electives: 40 credit hours

- Foreign Language - 16 Credits (Four consecutive courses in one language)
- Academic Courses (as defined under BFA requirements) - 16 Credits
- Additional Electives (selected under advisement) - 8 Credits

Total credit hours for B.S. in Art History & Theory - 123

Students must also complete:
The University Global Perspective requirement

The University Lifetime Health & Wellness requirement
The University **Common Ground** requirement

The University Global Perspective required credits could be taken within the required academic and/or Art History requirements. If a student completes the University Physical Education Requirement by taking two activity courses, the total number of credits to graduate is 126.

Note: additional PFIT activity credits (100-level PFIT, EQUS) may not be used toward any degree requirements

Typical Program
First Year

- ARTH 100-level Art History (three 2-credit classes) - 6 Credits
- ** ART 101 and 102 Foundations I and II -16 Credits
- ENGL 101 Writing I - 4 Credits
- ENGL 102 Writing II - 4 Credits
- Humanities 100 or 200 level - 4 Credits

Sophomore Year

- ARTH 211 Art in Our Time - 3 Credits
- ARTH 300-level Upper Level Art History - 4 Credits
- Foreign Language - 8 Credits
- Humanities 100 or 200 level - 4 Credits
- **Sophomore Studio or Electives - 8 Credits
- PHIL 283 Philosophy of the Arts I - 4 Credits
- PFIT Physical Activity Course - 1 Credit

Junior Year

- Upper Level Art History - 12 Credits
- Foreign Language - 8 Credits
- **Studio or Electives - 12 Credits

Senior Year

- Upper Level Art History - 8 Credits
- ARTH 460 Exploring Art History: Concepts, Methods and Practices - 4 Credits
- ARTH 499 B.S. Thesis in Art History and Theory - 2 Credits
- Electives - 16 Credits
- Wellness Course - 2 to 3 Credits

**Studio courses are assessed a fee for special materials. This fee may vary from $33.00 to $149.00 per credit hour.

Minors

Minors Offered by the School of Art and Design

Art History

This minor provides a broad base of knowledge about art as it relates to history and culture, exposes students to a variety of theoretical and methodological issues, and helps them develop critical and analytical skills that can be applied to art making. For BFA students, the Minor in Art History requires two additional 4-credit upper-level art history courses beyond those required for the BFA. The Minor in Art History is also open to all AU students.

Requirements for the Art History Minor

- ARTH 120-129 Foundations in Art History (Non-Western) - 2 Credits
- ARTH 130-139 Foundations in Art History (Ancient-Baroque) - 2 Credits
- ARTH 140-149 Foundations in Art History (Modern Contemporary) - 2 Credits
- ARTH 211 Art in Our Time - 3 Credits
- ARTH 300/400-level 4 Junior/Senior-level Courses - 16 Credits

Total credit hours 25

Master of Fine Arts

The Graduate Program

Four Master of Fine Arts programs are offered at the School of Art and Design: Ceramic Art, Electronic Integrated Arts, Painting and Sculpture/Dimensional Studies. All MFA students receive an assistantship. Entry into these programs is highly competitive. Those interested in learning more about the individual programs should contact the School directly at 607-871-2442 or email. Application materials may be obtained from the Graduate Admissions Office, Alfred University, 1 Saxon Drive, Alfred, NY 14802-1205.

College of Business

In support of this mission the undergraduate learning goals are:

1. Leadership - Our graduates will understand the situational context of leadership. They will be able to initiate collaboration with team members in identifying and achieving common objectives
2. Ethical Professional Behavior - Our graduates will understand the need for ethical practices in business
3. International Business Environment - Our graduates will have an awareness and understanding of the legal, political, social, economic, and cultural environments facing international business
4. Critical Thinking - Our graduates will be able to gather and analyze relevant information to identify problems and opportunities and to achieve creative and effective results
5. Professional Communication - Our graduates are effective communicators
6. Knowledge of Business Functions - Our graduates will understand core business functions:
    - Management
    - Accounting
    - Economics
    - Marketing
    - Management information systems (MIS)
    - Finance
    - Quantitative methods
    - Global business/International business environment
    - Legal environment of business

Accreditation

The undergraduate business program at AU is professionally accredited by AACSB International - The Association to Advance Collegiate Schools of Business. AACSB is a not-for-profit corporation of educational institutions, corporations and other organizations devoted to the promotion and improvement of higher education in business administration and management.

Less than five percent of business schools worldwide are accredited by AACSB-International. The AACSB accreditation is recognized as a mark of quality, which is highly valued by prospective employers and the nation’s leading graduate school programs offering the MBA or advance business graduate degrees.

Clubs and Honor Societies

The College of Business has a variety of organizations to enrich student experience. These include the Student-Managed Investment Fund (SMIF) Club, Alfred Marketing, Enactus (Entrepreneurial Action Society), and the Institute of Management Accountants.

The College also sponsors national honor societies that recognize superior academic achievement by business students. Alfred University sponsors chapters in Alpha Iota Delta National Honor Society in Decision Sciences, Beta Gamma Sigma (exclusively for

AACSB accredited schools), Delta Mu Delta International Honor Society in Business, Financial Management Association International Honor Society in Finance, Mu Kappa Tau in Marketing, the Omicron Delta Epsilon International Honor Society in Economics, and the Pacioli Honor Society in Accounting.

Career Success

Recent Alfred University graduates have attained positions in major international, national, and regional accounting firms (PricewaterhouseCoopers, KPMG, Ernst & Young, Crowe Horwath, The Bonadio Group), in the financial services industry (Travelers, Bank of America, Dun and Bradstreet, Commercial Metals Company, General Electric Commercial Finance, Merrill Lynch), in the information services arena (Hewitt Associates), in marketing-oriented companies (3S Enterprises, Integrated Organics), in technology oriented firms (Citadel Communications, CyberSource, IBM Global Services, Yumani), and in the Armed Services. A number of recent graduates also chose to pursue graduate or professional degrees at schools such as Albany Law School, Alfred University, Long Island University, Pace University, Purdue University, Rochester Institute of Technology, Schiller International University, University of Buffalo School of Law and University of Scranton.

General Education Requirements

The general education requirements within the College of Business provide students with the knowledge and skills that fulfill the Alfred University mission to “prepare well-educated, independent thinkers ready for lives of continuous intellectual and person growth.” This journey of learning begins with a first semester seminar course, which introduces students to the profession they are intending to study and to the resources available at Alfred University for academic and personal success. Students must also complete written communication and quantitative reasoning courses which insure competency in these basic skill areas. Through the general education requirements students are exposed to a variety of ideas and gain intellectual breadth by completing at least one course each from three key areas within the liberal arts and sciences curriculum (humanities, natural sciences, and social sciences). Additional liberal arts credits are fulfilled by student choices in the areas of humanities, natural sciences and mathematics, and social sciences.

First Semester Seminar

Students take a one-credit seminar or “Perspectives” course which provides an opportunity to learn about their profession and campus services and supports. Projects and teamwork provide opportunities to begin to develop relationships with faculty and classmates from their programs.

Written Communication

Each student must successfully complete two semesters of college writing. Students may be exempt from these courses based on strong college entrance exam scores, or Advanced Placement or International Baccalaureate courses completed in their high school programs.

Quantitative Reasoning

Each student must complete at least four credits of quantitative reasoning. This area includes the ability to understand and evaluate arguments framed in quantitative or numerical terms; to analyze subject matter using quantitative techniques; to construct and evaluate quantitative arguments of one's own; and to make reasoned judgments about the kinds of questions that can be effectively addressed through quantitative methods.

Humanities

Each student must complete at least four credits in the area of humanities. This area introduces students to people we have never met, places we have never visited, and ideas that have never crossed our minds. By showing how others have lived and thought about life, the humanities provides students with the ability to analyze texts and ideas that are contemporary and historical, personal and communal, and imaginative and reflective. Courses in modern languages, literature, history, religion, philosophy, and arts/music/theater history and theory will fulfill humanities requirements.

Natural Sciences

Each student must complete at least four credits in the area of natural science. This area introduces techniques of observation and experimentation, the relation of data to hypotheses, and the practice of scientific reasoning. This work provides a model for relating concrete empirical information to abstract models, stimulating multidimensional and creative habits of thought.

Social Sciences

Each student must complete at least four credits in the area of social science. This area engages students in theory as well as empirical exploration and analysis of human transactions. They address the mental and behavioral activities of individuals, groups, organizations, institutions, and nations. Social science disciplines seek generalizable interpretations and explanations of human interaction. Courses in communications, psychology, political science, anthropology, sociology, criminal justice, and global studies are among those fulfilling social science requirements.

List of Approved Courses

The College of Business general education program requires standard written communication courses (ENGL 101 and 102 or equivalent) completed by students in every college major. The First Semester Seminar (BUSI 105) is specifically designed for our business students.

The entry-level liberal arts courses best suited for remaining general education requirements are 100 and 200 level courses. Please note that a minimum of 4 credits is required in each of the humanities, natural sciences, and social sciences categories. Students who transfer equivalent 3-credit courses from other institutions will be considered to have fulfilled the general education requirements for these areas of study.

In addition to the general education requirements, all students must complete additional liberal arts elective courses to complete degree requirements for the Bachelor of Science (60 liberal arts credits). The courses approved to fulfill general education and liberal arts requirements are designated with degree attributes of Written Communication, Quantitative Reasoning, Humanities, Natural Science, and Social Sciences.

List of Approved Courses for General Education Program

These courses have been determined to meet the general education requirements and liberal arts electives requirements for the College of Business. Please note that some courses may not be offered each semester; see the Class Schedule on AU BannerWeb to determine availability of specific courses in a semester or other term.

Quantitative Reasoning
BIOL 226
BUSI 113, 150, 213
ENVS 205
ENGR 305
MATH 101, 102, 104, 151, 152, 253, 271, 371
MIS 101
POLS 230
PSYC 220
SOCI 230

Humanities

ARTH 210, all 300+ level courses
CHIN 101, 102, 201, 202
CLAS 201
COMM 205, 412
DANC 211
ENGL 200, 202, 205, 206, 211, 213, 214, 220, 225, 226, 230, 243, 256, 281, 293, 325, 326, 327, 328, 400, 406, 407, 408, 410, 411, 412, 413, 414, 415, 422, 424, 431, 432, 433, 434, 442, 445, 459, 472, 474, 475, 476, 481
ENGR 210
FREN 101, 102, 201, 202, 210, 302, 311, 316, 420
GLBS 210, 215, 216
GRMN 101, 102
HIST 107, 111, 120, 121, 152, 200, 211, 212, 223, 300, 301, 303, 307, 308, 309, 310, 311, 321, 322, 323, 324, 328, 329, 360, 363, 372, 375, 377, 383
IART 200
ITAL 101, 102
LATN 101, 102
MUSC 110, 120, 211, 212, 214, 215, 220
PDAT 220
PHIL 101, 105, 201, 202, 281, 282, 283, 304, 305, 306, 309, 310, 311, 312, 328, 341, 383, 388, 390, 400
POLS 304
PSYC 306, 309
RLGS 105, 165, 274

SJST 217, 226, 304, 307, 341, 382
SPAN 101, 102, 200, 201, 202, 213, 215, 216, 217, 218, 300, 301, 311, 315, 316, 360
THEA 110, 205, 211, 212, 220, 311, 312
WGST 215, 216, 256, 324, 382, 408, 412, 481

Natural Science

ASTR 103, 107, 303, 304, 307
ATHT 205, 222, 392, 393
BIOL 101, 102, 105, 106, 107, 108, 119, 130, 131, 150, 155, 207, 208, 357
CEMS 214, 216, 235
CHEM 105, 106, 310, 315, 316, 321, 343, 345, 346, 372, 374, 400, 420, 423, 461, 490
CSCI 156, 157, 205
DATA 156, 201, 202, 203
ENVS 101, 106, 120, 240, 241, 310, 351, 357, 415
GEOL 101, 103, 104, 106, 110, 201, 301, 302, 307, 408, 414, 464
PHYS 111, 112, 125, 126, 325, 326, 341, 401, 402, 405, 410, 421, 423, 424
SCIE 110, 111, 115, 117, 127

Social Science

ANTH 110, 120, 302, 303, 304, 309, 311, 312, 321, 400, 495
COMM 101, 110, 200, 210, 217, 220, 221, 237, 300, 301, 302, 309, 315, 325, 400, 401, 409, 410, 465
CRIM 322, 332, 340, 351, 400
ECON 201, 202, 310, 320, 331, 412, 420, 425, 445, 450, 460, 462
ENGR 206
ENVS 102, 205, 214, 220, 240, 241, 320, 415
GERO 118, 429
GLBS 101, 213, 221, 311, 315, 323, 325, 351, 495
HIST 323, 382
HLPM 201, 205, 301, 304, 308
LEAD 201
MGMT 305
POLS 110, 214, 232, 237, 242, 253, 271, 300, 311, 313, 316, 318, 321, 329, 331, 341, 346, 351, 355, 356, 373, 382, 411, 417, 431
PSYC 101, 118, 210, 230, 251, 261, 262, 282, 300, 302, 310, 311, 320, 322, 330, 332, 341, 342, 351, 362, 371, 372, 389, 411, 412, 429, 471, 472, 477, 485, 491, 492
SJST 101, 110, 115, 118, 201, 213, 282, 316, 336, 340, 341, 344, 346, 356, 425, 456, 465
SOCI 110, 214, 235, 236, 237, 242, 245, 253, 343, 344, 346, 348, 356, 420, 431, 495
SPAN 213
SPED 456
UNIV 101, 115
WGST 101, 211, 253, 305, 320, 346, 348, 351, 372, 465

AU Wellness

ATHT 111, 190, 215, 222
BIOL 105
PSYC 251, 322
WELL 100, 101

AU Written Communication

ENGL 101, 102
ENGR 110

Majors

College of Business students can obtain a Bachelor of Science degree with a major in Accounting, Business Administration, Business Analytics, Data Analytics, Finance, Health Planning & Management or Marketing. The majors in the College of Business provide options within a professional education program grounded in the liberal arts which prepares our students for post-graduation objectives ranging from immediate entry into the job market to graduate school. Alfred University's program emphasizes leadership development and active "hands-on" learning. All students complete a Field Experience requirement in consultation with their advisor. AU's environment provides an opportunity for leadership development with a mix of curricular and cocurricular activities which provide students with opportunities to attain distinction.

Students who complete any of the business majors and are accepted into the Master of Business Administration Program at Alfred can complete the MBA degree within one year of full-time study (31 graduate credits).

The College also offers minors in Accounting, Arts Management, Business Administration, Business Analytics, Data Analytics, Economics, Equine Business Management, Family Business and Entrepreneurship, Finance, Health Planning & Management, International Business, Leadership, Marketing, and Sports Management. College of Business students may minor in fields within or outside of the College of Business. The Business Pre-MBA minor is open to students outside of the College of Business and provides the foundation coursework needed to complete an MBA in one year of full-time study.

Business Professional Core Courses

The Bachelor of Science business degree is composed of business professional core courses shared by all majors, business courses specific to each major, business electives to total 48 credits in business, arts and sciences and general education core courses specified for business and liberal arts electives to reach a minimum of 60 credits of liberal arts courses (as required for all B.S. degrees). Depending on the major, students take additional electives to reach the total of 120 credit hours (which can include acceptable transfer credit) required for graduation. Students are also required to:

- Complete a minimum of 30 credit hours in upper-division business courses
- Maintain at least a 2.0 grade point average overall ("C") and 2.0 combined GPA in business and advanced economics courses
- Satisfy the University's Common Ground requirement
- Satisfy the University's Lifetime Health & Wellness requirement (PFIT and 100-level EQUS credits not included in the 120 credits for graduation)
- Satisfy the University's Global Perspective requirement

Business Professional Core Requirements

- ACCT 211 Financial Accounting - 3 Credits
- ACCT 212 Managerial Accounting - 3 Credits
- BUSI 105 Business Perspectives - 1 Credit
- BUSI 106 Contemporary Business - 3 Credits
- BUSI 457 International Business - 3 Credits **Or**
  FIN 458 International Financial Management - 3 Credits **Or**
  ECON 412 International Economics - 3 Credits **Or**
  MKTG 489 International Marketing - 3 Credits
- BUSI 499 Business Policy - 3 Credits
- FIN 348 Managerial Finance - 3 Credits
- LAW 241 The Legal Environment of Business - 3 Credits
- MGMT 328 Management and Organizational Behavior - 3 Credits
- MGMT 484 Operations Management - 3 Credits
- MIS 390 Introduction to Management Information Systems - 3 Credits
- MKTG 221 Marketing Principles and Management - 3 Credits

Additional Requirements:
Students are required to complete a Field Experience option selected from the following choices:

- Approved Internship (BUSI 485)
- Advanced courses with Active Learning Component (designated as Field Experience – CoB)

Arts and Sciences Core
Quantitative Methods

- BUSI 113 Descriptive Analysis & Statistics - 3 Credits
- BUSI 213 Research Methods
- * MATH 104 Quantitative Methods for Business - 4 Credits
- MIS 101 Analytics I

* MATH 151-Calculus I Or BUSI 150-Business Analytics Math can substitute for MATH 104

Communications

- ENGL 101 Writing I - 4 Credits
- ** ENGL 102 Writing II - 4 Credits

** Writing requirements are specified in the Catalog under General Education Requirements for Liberal Arts and Sciences, Basic Competencies, Written Communication.

Economics

- ECON 201 Principles of Microeconomics - 4 Credits
- ECON 202 Principles of Macroeconomics - 3 Credits
- Social Sciences (minimum) - 3 to 4 Credits
- Natural Sciences (minimum) - 3 to 4 Credits
- Humanities (minimum) - 3 to 4 Credits

Accounting

The Accounting major prepares students to become professional accountants. Those students interested in public accounting are encouraged to pursue the license to become a Certified Public Accountant (CPA); those interested in corporate or governmental accounting are encouraged to seek designation as a Certified Management Accountant (CMA). All students are urged to augment their accounting curriculum with a minor or coursework in those areas which are in great demand in accounting, such as finance or economics. Accounting graduates can apply for the MBA- Accounting specialization, which leads to fulfillment of the 150 credits required by New York State for the CPA exam.

Given that course requirements for taking the CPA examination are set by state law, the Accounting major's curriculum is tightly structured. They must take all the courses listed in the Business Professional Core, Arts and Sciences Core and general education, arts and sciences electives to total a minimum of 60 credit hours, plus all accounting courses listed below:

- ACCT 361 Intermediate Accounting I - 3 Credits
- ACCT 362 Intermediate Accounting II - 3 Credits
- ACCT 371 Personal Income Tax - 3 Credits
- ACCT 372 Cost Accounting - 3 Credits
- ACCT 441 Auditing Theory and Practice - 3 Credits
- ACCT 462 Advanced Accounting - 3 Credits
- ACCT 471 Corporate Taxation - 3 Credits
- FIN 300+ one additional upper-level Finance course - 3 Credits
- LAW 442 Commercial Law - 3 Credits

Accounting majors must receive a grade of "C" or better in all accounting courses (those with ACCT course prefixes).

Students who wish to continue into the MBA-Accounting Program at Alfred University must complete a graduate application and all required MBA application materials.

Business Administration

The Business Administration major prepares students for professional careers in areas such as accounting, business economics, family business, finance, management, marketing, management information systems, international business and entrepreneurship. Each business administration student chooses a faculty advisor who not only helps him or her explore career options but also recommends courses to be taken over the sophomore, junior and senior years. The Business Administration major provides a high degree of flexibility. In consultation with a faculty advisor, a student is encouraged to explore career options, including graduate school, and to select business and non-business electives that provide a professional focus.

Students opting for this major must take the courses listed in the Business Professional core, plus one upper-level course in economics and business elective courses, to total a minimum of 48 credit hours in business. Students are encouraged to focus their business interests through selection of minors offered by the College of Business, as well as minors within the College of Liberal Arts and Sciences. The Arts and Sciences

Core courses, general education requirements and arts and sciences electives to total a minimum of 60 credit hours, must also be completed.

Business Analytics

The Business Analytics major provides a curriculum that combines core business subjects with math, computer science and analytics courses in order to equip students with the skills needed to be effective business analysts. The business analytics degree provides a curriculum that covers the entire lifecycle of data analysis including data organization and preparation, data analysis, data visualization and communications, as well as a capstone experience.

Students who wish to major in Business Analytics must complete the Business Professional Core and the Arts and Sciences Core, general education requirements, arts and sciences electives to total a minimum of 60 credit hours, and the following Business Analytics requirements:

- BUSI 150 Business Analytics Math - 3 Credits
- CSCI 156 Computer Science I - 4 Credits
- CSCI 205 Database Systems - 4 Credits
- DATA 201 Analytics II - 3 Credits
- DATA 202 Data Visualization and Analysis - 3 Credits
- DATA 203 Current Topics in Analytics - 3 Credits
- DATA 401 Analytics Capstone Project - 3 Credits
- DATA 402 Analytics Seminar - 1 Credit
- ECON 310 Applied Econometrics and Predictive Analytics - 3 Credits

Plus, choose 9 credit hours (3 classes) from the following:

- BUSI 322 Business Intelligence
- FIN 322 Financial Analytics
- MGMT 322 Management Analytics
- MKTG 322 Marketing Analytics
- MKTG 452 Market Research
- MKTG 454 Market Intelligence & Strategy

Data Analytics

The Data Analytics major is a uniquely interdisciplinary program utilizing the expertise of academic departments throughout the university. This program provides students with the ability to learn how to work with quantitative and qualitative data of every size. Students will gain a broad knowledge of the applications and techniques of using data from compiling, cleaning, and analyzing to ultimately providing valuable insights for data-driven solutions for employers. Beyond these skills, students will also learn how to effectively communicate data-driven answers to address organizational problems and identify strategic opportunities.

Students who wish to major in Data Analytics must complete the Arts and Sciences Core, general education requirements, arts and sciences electives to total a minimum of 60 credit hours, and the following Data Analytics requirements:

- BUSI 106 Contemporary Business - 3 Credits
- BUSI 113 Descriptive Analysis & Statistics - 3 Credits
- BUSI 213 Research Methods - 3 Credits
- CSCI 156 Computer Science I - 4 Credits
- CSCI 157 Computer Science II - 4 Credits
- CSCI 205 Database Systems - 4 Credits
- DATA 105 Analytics Perspectives - 1 Credit
- DATA 201 Analytics II - 3 Credits
- DATA 202 Data Visualization and Analysis - 3 Credits
- DATA 203 Current Topics in Analytics - 3 Credits
- DATA 401 Analytics Capstone Project - 3 Credits
- DATA 402 Analytics Seminar - 1 Credit
- ECON 310 Applied Econometrics and Predictive Analytics - 3 Credits
- ENGR 1xx Exploration Lab - 2 Credits
- MATH 151 Calculus I - 4 Credits
- MATH 253 Calculus III - 4 Credits
- MIS 101 Analytics I - 3 Credits

Finance

The Finance major emphasizes fundamental accounting, economics, and finance concepts and theories, and provides applied practice to promote well-informed financial decision-making. The major prepares students for careers in business and industry as financial analysts and managers, and provides an excellent background for graduate programs in finance or management. Other students enter the consulting or legal professions, or develop careers in the various occupations related to investment activity or financial institutions.

Students in the University’s finance program are actively sought by corporate recruiters who know the students have been well prepared for the world of contemporary finance.

Students who wish to major in Finance must complete the Business Professional Core and the Arts and Sciences Core, general education requirements, arts and sciences electives to total a minimum of 60 credit hours, and the following Finance requirements:

- ACCT 361 Intermediate Accounting I - 3 Credits
- ECON 331 Money and Banking - 3 Credits
- FIN 205 Student Managed Investment Fund - 1 Credit
- FIN 206 Student Managed Investment Fund Laboratory - 1 Credit
- FIN 310 Introduction to Financial Planning - 3 Credits
- FIN 460 Seminar in Finance - 3 Credits
- FIN 454 Security Analysis - 3 Credits
- FIN 455 Business Financial Decisions - 3 Credits
- FIN 458 International Financial Management - 3 Credits

Health Planning & Management

The Health Planning & Management major prepares students for professional careers in areas such as hospitals, long term care facilities, doctor's offices, clinics, other health care facilities, pharmaceutical industry, medical device industry, information technology and insurance companies. Each health planning & management student works with a faculty advisor who not only helps him or her explore career options but also recommends courses to be taken over the sophomore, junior and senior years. A structured internship provides an opportunity for experiential learning in preparation for a career in health planning and management. In consultation with a faculty advisor, students are encouraged to explore career options, including graduate school, and to select business and non-business electives that provide a professional focus.

Students who wish to major in Health Planning and Management must complete the Business Professional Core and the Arts and Sciences Core, general education requirements, arts and sciences electives to total a minimum of 60 credit hours, and the following Health Planning and Management requirements:

- HLPM 201 The Health Care Delivery System - 3 Credits
- HLPM 205 Public Health - 3 Credits
- HLPM 301 Healthcare Policy - 3 Credits
- HLPM 310 Legal and Ethical Issues in Healthcare - 3 Credits
- ECON 420 Healthcare Economics - 3 Credits
- HLPM 485 Internship - 1 to 3 Credits
- HLPM 495 Seminar: Healthcare Planning and Management - 3 Credits

Health Planning and Management majors must receive a grade of "C" or better in each course listed above and in MGMT 328 (Professional Core Course)

Marketing

The Marketing major provides students with applied experiences in new product development, market research and service learning.

Students who wish to major in Marketing must complete the Business Professional Core and the Arts and Sciences Core, arts and sciences electives to total a minimum of 60 credit hours, and the following Marketing requirements:

- MKTG 311 Digital & Social Media Marketing
- MKTG 452 Market Research - 3 Credits
- MKTG 479 Consumer Behavior - 3 Credits
- MKTG 486 Integrated Marketing Communications - 3 Credits
- MKTG 499 Strategic Marketing Management - 3 Credits

Plus, choose 3 credit hours from the following:

- MKTG 453 Marketing Practicum - 3 Credits
- MKTG 460 Seminar in Marketing - 3 Credits
- MKTG 482 Sales Management - 3 Credits
- MKTG 489 International Marketing - 3 Credits

Minors

Minors in the College of Business
The College of Business has developed minors in Accounting, Arts Management, Business Administration, Business Analytics, Data Analytics, Economics, Family Business and Entrepreneurship, Finance, Health Planning & Management, International Business, Equine Business Management, Leadership, Marketing, and Sports Management. Students completing any of these minors must complete at least half of their course work for the minor at Alfred University. A grade point average of a “C” (2.0) or better must be attained in courses submitted for completion of the minor.

Accounting

Non-Accounting majors can pursue a minor in accounting. The Accounting Minor Program provides students with a background in financial and managerial accounting, taxation and financial statements analysis. The minor also provides preparation for graduate programs in accounting, business and law.

Accounting Minor Requirements

- ACCT 211 Financial Accounting - 3 Credits
- ACCT 212 Managerial Accounting - 3 Credits
- ACCT 361 Intermediate Accounting I - 3 Credits
- * BUSI 113 Descriptive Analysis & Statistics - 3 Credits
- ECON 201 Principles of Microeconomics - 4 Credits
- ECON 202 Principles of Macroeconomics - 3 Credits
- ** MATH 104 Quantitative Methods for Business - 4 Credits

* ENGR 305, POLS/SOCI 230, or PSYC 220 may be substituted for BUSI 113
** MATH 151-Calculus I can substitute for MATH 104

Plus two courses from the following:

- ACCT 310 Forensic Accounting Introduction - 3 Credits
- ACCT 362 Intermediate Accounting II - 3 Credits
- ACCT 371 Personal Income Tax - 3 Credits
- ACCT 372 Cost Accounting - 3 Credits
- ACCT 462 Advanced Accounting - 3 Credits
- ACCT 471 Corporate Taxation - 3 Credits

Total credit hours 29

Arts Management

The Arts Management Minor provides an interdisciplinary approach to the business of art and management of arts organizations. Students have the opportunity to learn and explore the theoretical content and practical skills that engage arts professionals managing individual businesses, serving community arts organizations, and managing not-for-profit arts organizations in the visual, performing, and literary arts. The Arts

Management minor is jointly offered by the College of Business, the School of Art and Design, and the College of Liberal Arts and Sciences and is open to all AU students.

Requirements for the Arts Management Minor

- ACCT 211 Financial Accounting - 3 Credits
- BUSI 485 Internship - 2 to 4 Credits
- ECON 201 Principles of Microeconomics - 4 Credits
- MKTG 221 Marketing Principles and Management - 3 Credits

Choose one additional business course from the following:

- BUSI 301 Family Business Management - 3 Credits
- BUSI 439 Entrepreneurship in the 21st Century - 3 Credits

Choose three courses from the following, at least one from each section A and one from section B:

Section A- History and Theory

- ARTH Art History (any course) - 2 to 4 Credits
- ENGL 220, 254, 256, 325, 326, 327 Survey of American Literature
- DANC 211 Dance History - 4 Credits
- MUSC 110 Music Appreciation - 4 Credits
- MUSC 211 World Music - 4 Credits
- PHIL 283 Philosophy of the Arts I - 4 Credits
- PHIL 300 Topics in Philosophy (consult advisor) - 1 to 4 Credits
- THEA 110 Introduction to Theatre - 4 Credits
- THEA 311 Theatre: History, Art, Politics and Society I - 4 Credits
- THEA 200/300/400 Topics in Theatre (consult advisor) -1 to 4 Credits

Section B-Applied and Studio Skills Courses

- ART 111 Beginning Drawing - 4 Credits
- ART 121 Beginning Sculpture - 4 Credits
- ART 133 Beginning Photography - 4 Credits
- ART 151 Beginning Ceramics - 4 Credits
- ART 389 Exhibition Design (open only to Art and Design students) - 2 Credits
- DANC Dance (any course) - 1 to 4 Credits
- ENGL 200 Special Topics in Writing - 2 or 4 Credits
- ENGL 202 Fiction Workshop - 4 Credits
- ENGL 205 The Play's the Thing! - Playwriting - 4 Credits
- ENGL 206 Poetry Workshop - 4 Credits
- ENGL 460 Special Topics in Writing
- ENGL 472 Dramatis Personae - 4 Credits
- ENGL 474 Writing the Short Story - 4 Credits
- ENGL 475 Writing Formal Poetry - 4 Credits
- ENGL 476
- PDAT 120 Technical Theatre - 4 Credits
- PDAT 220 Design Fundamentals for Stage, Dance and Film - 4 Credits
- THEA 230 Stage Management Fundamentals - 2 Credits

- THEA 240 Acting I - 4 Credits
- THEA 270 Play Production - 1 to 4 Credits
- THEA 200/300/400 Topics (consult with advisor) - 1 to 4 Credits

Total credit hours 24-29

Business Administration Minor/Pre-MBA Program

The College of Business offers a 4 + 1 minor for non-College of Business students. By completing the appropriate foundation courses at the undergraduate level, a student may successfully complete the requirements for a Master's in Business Administration (MBA) at Alfred University in one year after receiving his or her undergraduate degree. A grade point average of a C (2.0) or better must be attained in the courses for completion of minor. Students completing the minor are thus eligible to complete the 31 credit hour MBA at Alfred University. The 4 + 1 Program does not guarantee admission to the MBA Program, as students must apply for admission and submit all required application materials.

Business Administration Minor Requirements:

- ACCT 211 Financial Accounting - 3 Credits
- ACCT 212 Managerial Accounting - 3 Credits
- * BUSI 113 Descriptive Analysis & Statistics - 3 Credits
- ECON 201 Principles of Microeconomics - 4 Credits
- ECON 202 Principles of Macroeconomics - 3 Credits
- FIN 348 Managerial Finance - 3 Credits
- MGMT 328 Management and Organizational Behavior - 3 Credits
- ** MGMT 484 Operations Management - 3 Credits
- MKTG 221 Marketing Principles and Management - 3 Credits

* ENGR 305 or POLS/SOCI 230 or PSYC 220 may be substituted for BUSI 113
** CEMS 484 may be substituted for MGMT 484

Total credit hours 28

Business Analytics

Non-Business Analytics majors can pursue a minor in business analytics. The minor consists of 29 credit hours that include courses in statistics, computer science, accounting, mathematics, and of course analytics.

Business Analytics Minor Requirements

- ACCT 211 Financial Accounting - 3 Credits
- * BUSI 113 Descriptive Analysis & Statistics - 3 Credits
- BUSI 150 Business Analytics Math - 3 Credits
- ** CSCI 156 Computer Science I - 4 Credits
- DATA 201 Analytics II - 3 Credits
- DATA 202 Data Visualization and Analysis - 3 Credits
- MIS 101 Analytics I - 3 Credits

* ENGR 305, POLS/SOCI 230 or PSYC 220 may be substituted for BUSI 113

** DATA 156 may be substituted for CSCI 156

Plus six (6) credit hours from among the following courses:

- BUSI 322 Business Intelligence
- ECON 310 Applied Econometrics and Predictive Analytics - 3 Credits
- FIN 322 Finance Analytics - 3 Credits
- MGMT 322 Management Analytics - 3 Credits
- MKTG 322 Marketing Analytics - 3 Credits
- MKTG 452 Market Research - 3 Credits

Total credit hours 29

Data Analytics

Non-Data Analytics majors can pursue a minor in data analytics. The minor consists of 28 credit hours that include courses in statistics, computer science, mathematics, and of course analytics.

Data Analytics Minor Requirements:

- * BUSI 113 Descriptive Analysis & Statistics - 3 Credits
- CSCI 156 Computer Science I - 4 Credits
- DATA 201 Analytics II - 3 Credits
- DATA 202 Data Visualization and Analysis - 3 Credits
- MATH 151 Calculus I - 4 Credits
- MIS 101 Analytics I - 3 Credits

* ENGR 305, POLS/SOCI 230 or PSYC 220 may be substituted for BUSI 113

Plus eight (8) credit hours among the following courses:

- ART 232 Introduction to New Media - 4 Credits
- ART 285 Digital Drawing - 4 Credits
- ART 332 Advanced Video Arts - 4 Credits
- ART 335 Interactive Media Studio - 4 Credits
- ART 336 Generative and Interactive Animation - 4 Credits
- ART 340 Design for Web and Mobile Devices - 4 Credits
- BIOL 358 Biogeography - 4 Credits
- BIOL 405 Bioinformatics - 4 Credits
- CSCI 200+ Computer Science Course 200-level+ - 4 Credits
- ECON 310 Applied Econometrics and Predictive Analytics - 3 Credits
- ENVS 206 Fieldcraft-Outdoor Proficiency - 4 Credits
- ENVS 212 Introduction to Remote Sensing - 4 Credits
- ENVS 220 Introduction to Geographic Information Systems - 4 Credits
- ENVS 301 Contemporary Topics in Geospatial Technology - 2 Credits
- ENVS 302 Mobile and Web-based GIS - 4 Credits
- ENVS 320 Advanced GIS Applications - 4 Credits
- ENVS 450 Independent Study - 1 to 4 Credits
- GEOL 206 Fieldcraft-Outdoor Proficiency - 4 Credits
- GEOL 450 Independent Study - 1 to 4 Credits
- MATH 231 Introduction to Data Science - 4 Credits

Total credit hours 28

Economics

Economics provides an excellent background for work in the fields of banking, finance, and other areas where an understanding of economics is required. The balanced coordination of economics and business administration courses is also appropriate for entry into a variety of civil service positions with the federal, state, and local government or entry into graduate school.

Economics Minor Requirements

- ECON 201 Principles of Microeconomics - 4 Credits
- ECON 202 Principles of Macroeconomics - 3 Credits
- ECON 460 Seminar in Economics - 3 Credits
- ECON 300+ Upper-level Economics Course - 3 Credits
- ECON 300+ Upper-level Economics Course - 3 Credits

Total credit hours 16

Equine Business Management

Students interested in the management of an equine business or working in the equine industry will benefit from this collaborative minor between Equestrian Studies and the College of Business.

Equine Business Management Minor Requirements Requirements:

- ACCT 211 Financial Accounting - 3 Credits
- BUSI 439 Entrepreneurship in the 21st Century - 3 Credits
- EQUS 215 Equine Business Management - 4 Credits
- MKTG 221 Marketing Principles and Management - 3 Credits
- MKTG 482 Sales Management - 3 Credits

Plus a minimum of six (6) credit hours from among the following courses:

- EQUS 200 Special Topics (approval depending on content) - 2 to 4 Credits
- EQUS 205 Introduction to Equine Science - 4 Credits
- EQUS 216 Horse Show Management - 4 Credits
- EQUS 218 Judging Horse Shows - 4 Credits
- EQUS 223 Hunter and Jumping Course Design - 2 Credits

Total credit hours 22

Family Business and Entrepreneurship

Students interested in the management of a Family Business or in developing the skills needed for success as an entrepreneur can minor in this area of business studies. Students will build upon foundation business skills with additional courses in legal and financial planning which are integral to the small business owner and entrepreneur. In

addition to these courses, students are required to complete an internship in a family or small business setting.

Family Business & Entrepreneurship Minor Requirements:

- ACCT 211 Financial Accounting - 3 Credits
- BUSI 301 Family Business Management - 3 Credits
- BUSI 439 Entrepreneurship in the 21st Century - 3 Credits
- BUSI 485 Internship - 1 to 4 Credits
- ECON 201 Principles of Microeconomics - 4 Credits
- LAW 241 The Legal Environment of Business - 3 Credits
- MKTG 221 Marketing Principles and Management - 3 Credits

Plus three (3) credit hours from among the following courses:

- ACCT 371 Personal Income Tax - 3 Credits
- BUSI 460 Seminar in Business - 3 Credits
- FIN 310 Introduction to Financial Planning - 3 Credits
- LAW 442 Commercial Law - 3 Credits

Total Credit Hours 24-26

Finance

Non-Finance majors can pursue a minor in finance. The minor provides the opportunity for students to cultivate the critical thinking skills and develop the ability to apply financial analysis to a wide range of business financial issues.

Finance Minor Requirements:

- ACCT 211 Financial Accounting - 3 Credits
- ACCT 212 Managerial Accounting - 3 Credits
- ECON 201 Principles of Microeconomics - 4 Credits
- ECON 202 Principles of Macroeconomics - 3 Credits
- FIN 310 Introduction to Financial Planning - 3 Credits
- FIN 348 Managerial Finance - 3 Credits
- FIN 455 Business Financial Decisions - 3 Credits
- FIN 458 International Financial Management - 3 Credits

Plus six (6) credit hours from among the following courses:

- FIN 205 Student Managed Investment Fund - 1 Credit
- FIN 206 Student Managed Investment Fund Laboratory - 1 Credit
- FIN 306 Student Managed Investment Fund Advanced Laboratory - 2 Credits
- FIN 454 Security Analysis - 3 Credits
- FIN 460 Seminar in Finance - 3 Credits

Total Credit Hours 31

Health Planning & Management

Students interested in exploring opportunities in Health Planning and Management will benefit from this minor. This minor provides the opportunity for students to gain knowledge about the diversity of career opportunities available in health planning and management while gaining a unique knowledge base that can be applied to many business environments. All business majors can benefit from this minor by augmenting their major area of study and gaining a basic understanding of the health care industry and how it impacts businesses in general.

Health Planning & Management Minor Requirements:

- ACCT 211 Financial Accounting - 3 Credits
- ACCT 212 Managerial Accounting - 3 Credits
- ECON 201 Principles of Microeconomics - 4 Credits
- ECON 202 Principles of Macroeconomics - 3 Credits
- HLPM 201 The Health Care Delivery System - 3 Credits
- HLPM 205 Public Health - 3 Credits
- HLPM 301 Healthcare Policy - 3 Credits
- HLPM 310 Legal and Ethical Issues in Healthcare - 3 Credits

Total Credit Hours 25

International Business

International Business is a current high-demand program of study based on the globalization of business. Students complete at least two semesters of a modern language, gain an understanding of global cultures, and build a foundation in all areas of international business. Students are encouraged to participate in an international study experience.

International Business Minor Requirements

- (Language) Two Semesters of one Modern Language - 8 Credits
- GLBS 101 Introduction to Global Studies - 4 Credits
- BUSI 457 International Business - 3 Credits
- ECON 412 International Economics - 3 Credits
- FIN 458 International Financial Management - 3 Credits
- MKTG 489 International Marketing - 3 Credits

Plus, Complete 1 of the following International Experiences:

- Business-related faculty-led travel course abroad - 3 Credits
- Internship Abroad - 3 Credits (minimum)
- One full semester of study abroad - 12 Credits (minimum)

Total Credit Hours 27-36

Leadership

The Leadership minor consists of cross-disciplinary courses in which students learn leadership principles and theories and study issues from varied perspectives. Students are challenged to assess problems, critically evaluate alternatives, and promote effective change. The minor is open to undergraduate students of any major or college.

Leadership Minor Requirements:

- SJST 101 Introduction to Social Justice Studies - 4 Credits
- * LEAD 201 Equality and Leadership - 2 Credits
- ** LEAD 475 Leadership Practicum - 2 Credits
- MGMT 328 Management and Organizational Behavior - 3 Credits

* WGST 201 can be substituted for LEAD 201
** WGST 475 can be substituted for LEAD 475

Plus, Complete at least 10 credits of the following:

- ATHT 432 Organization and Administration of Athletics - 2 Credits
- COAC 291 Philosophy, Principles and Organization of Athletics in Education - 3 Credits
- COAC 475 Theories and Techniques of Coaching Sports - 2 Credits
- COMM 210 Interpersonal Communication - 4 Credits
- COMM 309 Persuasion: Reception and Responsibility - 4 Credits
- COMM 315 Understanding Global Media and Cultural Change - 4 Credits
- COMM 325 Global Communication - 4 Credits
- COMM 401 Technology and Communication - 4 Credits
- COMM 409 Organizational Communication - 4 Credits
- COMM 410 Communication Ethics - 4 Credits
- COMM 465 Gender, Race, Class and Media - 4 Credits
- ECON 425 Wealth and Inequality - 4 Credits
- ENGL 222 The Harlem Renaissance - 4 Credits
- ENGL 256 Multicultural American Literature - 4 Credits
- ENVS 214 Environment, Politics and Society - 4 Credits
- GERO 118 Introduction to Adult Development and Aging - 4 Credits
- LEAD 300 Special Topics in Leadership - 1 to 4 Credits
- LEAD 301 Improving Alfred University - 2 Credits
- LEAD 476 Service Leadership Experience - 2 Credits
- PHIL 281 Ethics - 4 Credits
- PHIL 306 Personal Identity and the Self - 2 Credits
- POLS 214 Environment, Politics and Society - 4 Credits
- POLS 253 Dictatorship and Democracy - 4 Credits
- POLS 271 World Politics - 4 Credits
- POLS 355 Public Policy - 4 Credits
- POLS 356 Social Movements - 4 Credits
- PSYC 282 Social Psychology - 4 Credits
- SJST 201 Women and Gender in Society - 4 Credits
- SOCI 242 Social Problems - 4 Credits
- SOCI 253 Social Welfare Institutions - 4 Credits
- SOCI 355 Power, Privilege, and Inequality - 4 Credits

- UNIV 115 Concepts of Service Learning - 2 Credits
- WGST 101 Women and Gender in Society - 4 Credits
- WGST 305 Gender and Organizations - 3 Credits

Total credit hours 21-23

Marketing

Non-Marketing majors can pursue a minor in marketing. The Marketing minor is recommended for business and non- business students who want to consider sales, advertising, and marketing careers, or want to complement their major area of study.

Marketing Minor Requirements

- * BUSI 113 Descriptive Analysis & Statistics - 3 Credits
- ECON 201 Principles of Microeconomics - 4 Credits
- MKTG 221 Marketing Principles and Management - 3 Credits
- MKTG 479 Consumer Behavior - 3 Credits

* ENGR 305, POLS/SOCI 230 or PSYC 220 may be substituted for BUSI 113

Plus six credit hours from among the following courses:

- MKTG 311 Digital & Social Media Marketing
- MKTG 452 Market Research - 3 Credits
- MKTG 453 Marketing Practicum - 3 Credits
- MKTG 460 Seminar in Marketing - 3 Credits
- MKTG 482 Sales Management - 3 Credits
- MKTG 486 Integrated Marketing Communications - 3 Credits
- MKTG 489 International Marketing - 3 Credits
- MKTG 499 Strategic Marketing Management - 3 Credits

Total Credit Hours 19

Sports Management

The Sports Management Minor draws from various academic areas to provide students with an exposure to the business of sport. Students combine foundation skills in business administration with knowledge and skills required to manage sports operations. An internship in a sports facility provides a culminating professional experience for the minor.

Sports Management Minor Requirements:

- ATHT 232 Introduction to Sports Management - 3 Credits
- ATHT 242 Sports, Society, and Ethics - 3 Credits
- ATHT 432 Organization and Administration of Athletics - 2 Credits
- BUSI 485 Internship (in a sports-related business) 2 to 4 Credits
- COMM 302 Public Relations Principles - 4 Credits
- LAW 241 The Legal Environment of Business - 3 Credits
- MGMT 328 Management and Organizational Behavior - 3 Credits

- MKTG 221 Marketing Principles and Management - 3 Credits

Total Credit Hours 23-25

NYS College of Ceramics

Programs and Schools

The College of Ceramics is comprised of: the School of Art and Design, four programs within the Kazuo Inamori School of Engineering (Ceramic Engineering, Glass Engineering Science, Materials Science and Engineering, and Biomaterials Engineering), and the S.R. Scholes Library. Two additional engineering programs (renewable energy and mechanical engineering) are part of the Inamori School of Engineering, but are not state-supported; they are non-statutory programs.

The College's academic programs lead to the B.S. degree in engineering programs with various options; the B.F.A. with numerous concentrations in art and design and the B.S. in Art History and Theory; the M.S. in the engineering areas; the M.F.A. in three art and design areas; and the Ph.D. in Ceramics, Glass Science, and Materials Science and Engineering. Specific degree requirements for undergraduate degree programs are outlined on the following pages.

Additional Resources

Institute for Electronic Arts
New York State Center for Advanced Ceramic Technology
Paul Vickers Gardner Glass Center
Schein-Joseph International Museum of Ceramic Art
S.R. Scholes Library

Buildings and Equipment

The Ceramics College occupies a number of buildings on the Alfred University campus, including Charles Harder Hall, the McGee Pavilion, Binns-Merrill Hall, the Hall of Glass Science and Engineering, McMahon Engineering Building, Scholes Library and the Joyce and Walton Family Center for Health and Wellness.

Harder Hall contains many of the studios and labs for the School of Art and Design and art history lecture and seminar spaces. The building's central courtyard surrounds an impressive kiln room, containing both gas- and electric-fired kilns; the ceramic studios and glaze labs are in close proximity. Gallery space is available for faculty and student shows, as well as for a wide range of special exhibitions.

The statutory portion of the Inamori School of Engineering is housed mainly in the three-story John F. McMahon Engineering Building, which provides approximately 56,000 square feet of space for laboratories, classrooms and offices. Students are able to gain invaluable hands-on experience with high-tech and traditional processing and characterization equipment, starting in the first year with engineering communications and processing courses. The programs in renewable energy and mechanical engineering are housed in the Engineering Lab Building, which includes engineering laboratories as well as office space.

Binns-Merrill Hall houses activities and faculty from art and engineering, including laboratories for processing and testing ceramic and glass products, X-ray and microscopy, research and development, as well as lecture and seminar rooms. Drawing, neon, hot glass and sculpture studios, and administrative offices are also

located in Binns-Merrill. The Hall of Glass Science & Engineering houses laboratories and faculty offices supporting the glass engineering program.

The **Scholes Library** is a significant resource in the areas of engineering and art; its print and non-print resources. The Schein-Joseph International Museum of Ceramic Art at Alfred is housed in temporary quarters on campus as plans proceed for a new building, now in the design stage.

College of Liberal Arts and Sciences

The Bachelor’s Degree

The undergraduate curriculum in Alfred University’s College of Liberal Arts and Sciences 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.

Our curriculum provides students with opportunities to deepen their knowledge and develop skills so that they may better:

- explore human cultures, and the physical and natural world;
- communicate as readers, writers, speakers, listeners, and artists;
- respond to problems and/or opportunities creatively;
- practice personal and social awareness through engagement with local and global communities;
- and apply knowledge and skills across general and specialized studies.

We believe that liberally educated citizens can best perform complex intellectual tasks, tasks which have technical, moral, and political consequences. Our goal 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 our students not only for multiple careers, but for graduate and professional schools and for leadership in the world.

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 24 majors and numerous minors. In addition, students may take courses and complete minors in other colleges within the University, as long as prerequisites for these courses and minors are met.

Graduation Requirements

To qualify for a Bachelor of Arts (B.A.) or Bachelor of Science (B.S.), students must complete the following:

- a minimum of 124* credit hours with a cumulative grade point average of at least 2.00, of which at least 90 credit hours must be liberal arts course work (as defined by New York State Department of Education) for the B.A., and at least 60 liberal arts credit hours for the B.S.
  NOTE: a maximum of 10 Music ensemble credits and 8 PE or EQUS credits can be counted toward the 124* credits
- the requirements for the CLAS General Education Program (see below)
- the First-Year Experience (FYE) or Transfer Seminar requirement (see below)
- the requirements for a CLAS approved major that include the University Global Perspective requirement
- the University Lifetime Health and Wellness requirement

- at least 45 credit hours in residence at Alfred University
- the final 30 credit hours in residence (for exceptions see AU policy on “Transfer of Credit”)

Transfer Credits

The following criteria apply to the evaluation of transfer records:

- Decisions about whether a transfer course satisfies a specific General Education requirement are made by the Dean, in consultation with the academic program with oversight for that particular General Education area.
- Decisions about whether a transfer course satisfies a major or minor requirement are made by the Chair or Director of the specific academic program, in consultation with the faculty of that program.
- A three credit hour course will satisfy a four credit hour General Education requirement; however, only 3 credits will be applied in transfer credit.
- Online transfer credits taken after matriculation will not be accepted to meet the Written Communication General Education requirement, the Foreign Language General Education requirement, the Literature General Education requirement, or Writing courses taken to meet the Arts General Education requirement. Any other decisions regarding the approval of online credit will be made by the division related to major credits or the Dean in consultation with the academic program related to General Education credit.
- Go to Transferable Credit page in the catalog or the webpage for Academic Regulations for the University’s detailed policy on transfer of credit.

Advising

Our CLAS faculty members are dedicated to working with students to help them reach their individual goals, not only inside the classroom, but also through research, short-term study abroad experiences, and advising. The College of Liberal Arts & Sciences believes that high quality academic advising is essential to the well-being of both the College and its students.

Upon matriculation, each student is assigned a faculty advisor. If the student has expressed an interest in a particular major at matriculation, the student will be assigned to an advisor within that major. If the student has not expressed a major interest at matriculation, he or she will begin with an advisor who will help the student to explore majors, and then be assigned to an advisor in the major area once the major has been formally declared. Faculty advisors are available not only to assist in choosing courses and majors, but also to help students develop a well-rounded plan to reach individual personal and professional goals.

Good advising is collaboration. Students are ultimately responsible for making their own decisions and for meeting all requirements. Advisors encourage self-reliance, assist students in exploring opportunities at AU and beyond, and connect students to a community of resources at Alfred University.

General Education Requirements

The General Education Program, required of all students in the College of Liberal Arts and Sciences, is designed to help students hone their fundamental academic skills and expand their intellectual breadth. In addition, it creates common points of reference for students pursuing different majors. The program ensures that students have 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 course work that teaches these competencies or through performance on standardized tests; 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 at least 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, as this provides an opportunity for intellectual exploration as students consider which academic area they would like to focus on for their major. These requirements are normally satisfied through course work; some may be met through proficiency examinations (which carry no academic credit).

Basic Competencies

The CLAS Basic Competencies requirements are in the areas of Written Communication, Quantitative Reasoning, and Foreign Languages. The ability to write well, communicate in another language, and use quantitative reasoning to problem solve are important skills greatly valued in today’s world. Most students continue to hone their skills in writing, quantitative reasoning, and languages beyond the basic General Education requirements through intermediate and advanced level courses offered in the College. “Attribute” codes in the online course system (Banner) help students search for and identify appropriate courses that fill these specific area requirements.

I. Written Communication (Attribute 01)

Each student must demonstrate writing competency through the successful completion of ENGL 102 or an equivalent (as approved by the English Division faculty). Depending on college entrance exam scores, students are placed in the appropriate level writing course. Normally students enroll in ENGL 101 and 102 in their first year in the College.

Students with the following scores must take both ENGL 101
and ENGL 102:

- SAT Writing - 499 or lower

- SAT Verbal or SAT Read-Write - 539 or lower
- ACT English - 25 or lower

Students with the following scores should take ENGL 102:

- SAT Writing - 500-699
- SAT Verbal or SAT Read-Write - 540-739
- ACT English - 26-29

Students with the following scores are exempt from ENGL 101 and 102, having demonstrated sufficient college level writing competency:

- SAT Writing - 700 or higher
- SAT Verbal or SAT Read-Write - 740 or higher
- ACT English - 30 or higher

The Division of English does not accept courses taken online for transfer credit to fulfill the General Education Writing Competency, the Literature Area of Knowledge requirement, or the Arts Area of Knowledge requirement. This policy applies to students after matriculation at Alfred University, and is based upon the centrality of classroom discussion and debate to the learning outcomes of Writing II and 200-level literature and creative writing courses. In some cases, the Division of English will accept transfer credit for online coursework for Writing I, the first half of the Writing Competency. In exceptional circumstances, the Division of English may choose to review this policy on a case-by-case basis.

II. Foreign Language (Attribute 02)

Each student in the College of Liberal Arts and Sciences must successfully demonstrate competence in a language other than English equivalent to the second semester of the first year of a foreign language at the college level.

Students are expected to begin undertaking language study no later than their sophomore year and continue each subsequent semester with the language until the requirement is fulfilled. Students may also demonstrate this proficiency through a language placement exam or a challenge exam, arranged through the Division of Modern Languages, although successful completion of the Language Placement Exam does not confer academic credit.

Language placement exams, offered every semester, help to determine the appropriate language course and level for students. The Placement Exam is a tool to be used by students together with their advisor and the appropriate professor(s) in the Division of Modern Languages to identify the best course corresponding to an individual student’s skills. Even if you plan to wait to take a language course in your sophomore year, it is highly recommended that you take the Placement Exam during the first week of your first semester to avoid loss of language knowledge from high school.

If a student is continuing a language taken for more than two years in high school, or is a native speaker of Spanish, French, or German, he or she must take the Language Placement Exam. Students do not need to take the Language Placement Exam if they plan to study a language they have not previously studied. Students who want

to demonstrate proficiency in a language not offered at Alfred should consult with the Chair of the Division of Modern Languages.

To be considered for membership in Phi Beta Kappa students must have, among other qualifications, demonstrated intermediate proficiency in a foreign language through 200-level coursework or scoring above 600 on the Language Placement Exam.

The Division of Modern Languages does not accept courses taken online for transfer credit after matriculation in fulfillment of the General Education Foreign Language Competency. The position of the Division of Modern Languages regarding courses taken online is based on the National Standards for Language Learning as delineated by the American Council on the Teaching of Foreign Languages (ACTFL). In exceptional circumstances, the Division may choose to review this policy on a case by case basis.

III. Quantitative Reasoning (Attribute 03)

Students must demonstrate basic competency in quantitative reasoning. The Quantitative Reasoning requirement is fulfilled by one of the following:

- A score of 630 or higher on the SAT Math
- A score of 28 or higher on the ACT Math
- A score of 4 or higher on the Advanced Placement Exam in either Calculus AB or Calculus BC
- The successful completion of an AU designated Quantitative Reasoning (QR) course. The following courses are currently designated as QR courses; the list is updated annually and posted on the Alfred website.

BIOL 226 Biostatistics - 4 Credits

BUSI 113 Descriptive Analytics & Statistics - 3 Credits

ENVS 205 Environmental Data Analysis - 4 Credits

MATH 101 Communicating with Numbers - 4 Credits

MATH 104 Quantitative Methods for Business - 4 Credits

MATH 151 Calculus I - 4 Credits

PHIL 282 Introduction to Logic - 4 Credits

POLS 230 Introduction to Data Analysis and Statistics - 4 Credits **Or**
SOCI 230 Introduction to Data Analysis and Statistics - 4 Credits

PSYC 220 Psychological Methods and Statistics - 4 Credits

SCIE 127 Doing Science - 4 Credits

Areas Of Knowledge

General Education requirements for different Areas of Knowledge (A-F) provide students with an introduction to different ways of thinking, knowing, and seeing, laying the foundation for a lifetime of inquiry and learning. While many courses are offered in

these different academic disciplines, only certain courses in the CLAS curriculum are designated as fulfilling the General Education requirement.

Degree Requirement Academic Field (Attribute) Code

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; 4 credits each from two of the following categories):

- Psychology (E1)
- Political Science or Economics (E2)
- Sociology or Anthropology (E3)

F Natural Sciences (8 credits; at least 2 credits from F-I)

- Scientific Inquiry (F-I)
- Scientific Knowledge (F-II)
- Science and Society (F-III)

First-Year Experience Program (FYE)

The College's First-Year Experience program is designed to foster intellectual engagement so that students are able to succeed academically and find a meaningful role for themselves both in the Liberal Arts & Sciences community and as citizens of the world. Each FYE course is taught by a faculty member dedicated to the success of first-year students. Along with a peer leader associated with the course, each FYE faculty member helps new students engage with the Alfred community and transition to college-level learning.

The goals of the FYE program are to:

- Help students produce high-quality college-level work and develop a positive work ethic.
- Encourage students to form "learning communities" in which students share responsibilities and support one another in their academic endeavors.
- Provide first-year students with the opportunity to participate in a small, seminar-style class in which concentrated attention can be paid to each student and close working relationships between students and instructors can develop.
- Encourage students to become fully integrated into the University community by introducing students to and encouraging participation in a wide variety of extracurricular activities.

The FYE program also provides a foundation for the General Education curriculum. To that end, all FYE courses, once successfully completed, fulfill one of the General Education or University requirements.

Transfer Student Program

The CLAS Transfer Student Program is designed to help new transfers make the transition to Alfred University. Students will take the Transfer Seminar (CLAS 101) during their first semester at Alfred. As the cornerstone of the Transfer Student Program, the seminar provides an opportunity for students to get to know the intellectual community they have joined, while introducing them to campus resources that will help them succeed at Alfred. Throughout the seminar, students will further develop core skills that lead to academic and professional accomplishment. The Transfer Student Program also facilitates mentoring relationships among the transfer students and their faculty and peers.

Academic Exploration

Not decided on a major yet? It's an asset, NOT a problem.

Many students entering college don't know exactly what they want to do. They know what they like, or don't like, but they don't know how to sort it all out and arrive at a major. Alfred University's Academic Exploration pathway has a number of advantages for students who want to investigate the many choices, including interdisciplinary choices, available to them in the College of Liberal Arts and Sciences.

Personal Attention

With about 2,000 undergraduate students and a faculty-student ratio of about 1-to-12, you'll get the kind of personal attention you need to explore options. Your academic advisor will take the time to get to know you, and will sit down with you to discuss your interests and the various ways you might develop those interests in specific programs and majors.

Emphasis on Good Teaching and Advising

Many of our faculty members are internationally known in their fields as researchers, artists, writers, and leaders, however, their first priority is always their students. The Academic Exploration pathway provides you with an opportunity to work with many different teachers and student groups to discover what inspires you! As you are exploring the possibilities, you'll also be fulfilling your college's core requirements in humanities and language, mathematics and the sciences, and the social sciences.

Uncommon Flexibility

Alfred University honors an interdisciplinary approach to education, and because we are a small institution, you have the opportunity to take courses in our four diverse schools and colleges. That means a biology major who wants to study jazz, a business student who is interested in history, or an engineering student who wants to write poetry, can easily do so without a lot of paperwork.

Declaring a Major

By the end of your sophomore year, you should be ready to declare a major. But if your interests remain diverse and haven't coalesced into one area, we can then work with you to develop an Interdepartmental Major in the College of Liberal Arts and Sciences, or an Individually Structured Major.

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 course work toward the major must be completed at Alfred University. Transfer credits toward the major are approved by the appropriate Chair or Director, in consultation with program faculty.

Selecting a Major
Students are expected to declare their major(s) by the end of the sophomore year. We advise students to explore 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 course work in the discipline before declaring the major. Faculty members are great resources for discussing possible majors. Students may even choose to pursue double majors within the College of Liberal Arts and Sciences, or double degrees in two of the colleges or schools at Alfred University. However, students interested in pursuing only one major in one of Alfred University's other colleges or schools will need to formally transfer to that college or school.

Some majors require specific sequencing of courses and careful planning, with some prerequisite courses strongly recommended for the first 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.

All courses required for a major must be completed with grades of "C" or better. The following majors are offered by the College of Liberal Arts and Sciences:

Athletic Training
Biology
Chemistry
Communication Studies
Computer Science
Criminal Justice Studies
Early Childhood/ Childhood Education Philosophy
English
Environmental Studies
Foreign Language and Culture Studies
General Science
Geology
Gerontology
Global Studies
Health Fitness Management
History
Interdepartmental Major
Mathematics
Math with Actuarial Science

Physics
Political Science
Psychology
Sociology
Spanish

Interdisciplinary Majors

Global Studies

The interdisciplinary Global Studies major fosters international awareness of the variety, complexity, and interconnectedness of modern populations ranging from ethnic groups to nation-states by exposing students to diverse disciplinary perspectives and encouraging international study abroad experience. The major includes a required Introduction to Global Studies, a broad selection of core courses in contemporary global issues across the curriculum, advanced study in foreign language and a capstone global issues seminar emphasizing original research based on study abroad experience.

Requirements for Global Studies Major
I. Foundation Courses (Required)

- GLBS 101 Introduction to Global Studies - 4 Credits
- * GLBS 495 Global Issues Seminar - 4 Credits

* Modern Languages: second year competency (up to 8 hours)

3 out of 4 of the following:

- ANTH 110 Cultural Anthropology - 4 Credits
- ECON 202 Principles of Macroeconomics - 3 Credits
- HIST 107 The World in the 20th Century - 4 Credits
- POLS 271 World Politics - 4 Credits

II. Study Abroad (Recommended)
One or two semesters (consult with your advisor)

- OCST 301 Cultural Orientation, Reflection and Engagement - 2 Credits

III. Electives
Choose 16 elective credits from at least two of the Categories 1-6, including at least 2 courses at the 300 or 400 level. Note: If a Topics course in any discipline has a GP designation, it will likely qualify as a Global Studies elective (consult with your advisor).

Categories of Electives
1. History

- HIST 111 Modern Western History - 4 Credits
- HIST 120 The Ancient Mediterranean - 4 Credits
- HIST 300 Topics in History (upon approval) - 1 to 4 Credits
- HIST 301 America in War during the 20th Century - 4 Credits
- HIST 309 Israelis, Arabs and American Foreign Policy - 2 Credits

- HIST 310 The Ancient Greeks - 4 Credits
- HIST 311 The Roman World - 4 Credits
- HIST 322 Churchill, Stalin, Roosevelt, Hitler - 2 Credits
- HIST 372 America as a World Power, 1898-Present - 4 Credits
- HIST 383 The Nazi Holocaust - 2 Credits

2. Political Science

- POLS 253 Dictatorship and Democracy - 4 Credits
- POLS 351 European Politics - 4 Credits
- POLS 373 Terrorism and International Security - 4 Credits
- POLS 382 Latin American Politics - 4 Credits
- POLS 200/300/400 Special Topics (upon approval) - 1 to 4 Credits

3. Economics and Business

- BUSI 305 German Auto Industry - 4 Credits
- *BUSI 457 International Business - 3 Credits
- ECON 202 Principles of Macroeconomics - 3 Credits
- ECON 412 International Economics - 3 Credits
- ECON/BUSI/FIN 200/300/400 Topics (upon approval) - 3 Credits
- *FIN 458 International Financial Management - 3 Credits
- *MKTG 489 International Marketing - 3 Credits

*These courses have prerequisites; see course descriptions

4. Cultural Anthropology/Interdisciplinary Studies

- *ANTH 303 Health and Culture - 4 Credits
- *ANTH 304 Language and Culture - 4 Credits
- *ANTH 312 Violence and Culture - 4 Credits
- *ANTH 470 Field Work - 2 to 4 Credits
- ANTH 495 Global Issues Seminar - 4 Credits
- ANTH 200/300/400 Special Topics in Anthropology - 1 to 4 Credits
- FREN 210 Global Perspectives: Paris - 2 Credits
- *FREN 316 Contemporary French Culture - 4 Credits
- WGST 200/300/400 Special Topics (upon approval) - 1 to 4 Credits

*These courses have prerequisites; see course descriptions

5. Art/Literature/Communications

- ARTH 126 Buddhist Arts of Asia - 2 Credits
- ARTH 127 Arts of Ancient India - 2 Credits
- ARTH 300/400 Topics in Art History (upon approval) 2-4
- ARTH 304 Global Arts: Contemporary Asia - 4 Credits
- ARTH 305 South Asian Arts 15-20c: Mughals to Modern - 4 Credits
- ARTH 306 Arts of Japan - 4 Credits
- ARTH 307 East Asian Design and Material Culture - 4 Credits
- ARTH 354 Recent Sculptural Practices - 4 Credits
- ARTH/WGST 382 Gender and Art History 4

- ARTH 466 Histories of Photography in the Non-Western World - 4 Credits
- COMM 200/300/400 Topics in Communication 1-4
- COMM 221 Pop Culture Goes Global - 4 Credits
- COMM 315 Understanding Global Media and Cultural Change - 4 Credits
- COMM 325 Global Communication - 4 Credits
- ENGL 226 The Holocaust and Literature - 4 Credits
- ENGL/WGST 481 International Women Writers 4
- *FREN 312 French Literature II 4
- MUSC 211 World Music - 4 Credits
- SPAN 217 Exiled from Justice: Equatorial Guinean Writers in Africa and Spain - 4 Credits
- SPAN 218 The Bombs and Ballots of Basque Literature in Spain - 4 Credits
- SPAN 220 Literatura Infantil y Juvenil - 4 Credits
- SPAN/WGST 215 Framing Gender: Latin Amer Film 4
- SPAN/WGST 216 Cuba Close Up: Film since Revolution 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 400 Topics in Hispanic Literature 1-4

*These courses have prerequisites; see course descriptions

6. Philosophy and Religion

- RLGS 105 Introduction to Religions of the World - 4 Credits

Total credit hours 48-50

Upon completion of this program a student is able to:

1. Demonstrate the ability to identify, delineate and critically analyze the principal concepts and intellectual frameworks of Global Studies.
2. Recognize and evaluate the varied ways in which global cultural, social, economic, political and technological forces shape the trajectories of collective groups and individuals.
3. Establish informed positions on a wide range of contemporary global challenges – such as economic development, clashing cultures, environmental degradation, violence, international terrorism – and defend their positions with logic and evidence.
4. Recognize cultural differences that mark the world’s varied linguistic groups, nationalities, religions, and other distinct group identities.
5. Evaluate the quality of arguments and evidence proffered by scholars, peers, public media, and themselves.
6. Demonstrate improved oral and written communication skills.

Individually Structured Major

Individually Structured Major (ISM)

The Individually Structured Major offers students the opportunity to structure an independent, interdisciplinary major in cases where the student's plan of study cannot be accommodated by one or more of the existing majors within the College of Liberal Arts and Sciences. The ISM must fulfill the goals of a liberal arts education; therefore, courses that make up the major are expected to largely be offered by the College of Liberal Arts and Sciences. This major is open to highly motivated, self-directed students with a minimum 3.0 grade point average. All courses to be counted in the major must have a grade of C or better.

For students willing to put the time, thought, and effort into creating an ISM, the process and learning experience can be rewarding, especially as students work closely with a team of faculty advisors. The capstone to the ISM is a Baccalaureate Project undertaken in the senior year, which allows students to integrate elements of their program in meaningful, creative, and productive ways. Students pursuing the ISM receive a Bachelor of Arts upon completion of their Alfred University degree requirements.

Each Individually Structured Major requires a formal program proposal, designed by the student in consultation with a Faculty Advisory Board chosen by the student. Students interested in initiating the application process for an ISM should meet with the Assistant Dean of the College of Liberal Arts and Sciences no later than mid-semester of their sophomore year, as the application involves several steps and requires research and time. Complete applications must be received no later than the end of the sophomore year. Proposals are then reviewed by the ISM Faculty Steering Committee and the Dean and must be approved by the beginning of the student’s junior year.

Some of the academic programs designed by students under the auspices of the Individually Structured Major include Art: Museum Studies and Entrepreneurship; Ecological Psychology; Historic Preservation; Integrated Emergency and Disaster Relief Operations; Media Politics; Sustainable Agriculture; Violence and Conflict Studies, and Social Justice and Popular Media.

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 must 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 (to view these Areas of Knowledge, go to the General Education Requirements tab, then the Areas of Knowledge accordion), 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. The courses for the major also do not need to carry the General Education attribute for that Area of Knowledge. However, at least 24 of the 40 total credit hours must be at the 300 level or above. All courses to be counted in the major must have a grade of C or better.

Minors

Minors

Students are strongly encouraged to declare one or more minors to supplement the major field. A minor allows students the opportunity to broaden their educational experience and may enrich career possibilities. In addition to minors offered by the College of Liberal Arts and Sciences (listed below), many CLAS students pursue minors offered by Alfred University's other colleges and schools. The minors in business, education, and art history, in particular, complement a number of CLAS programs.

Minors normally range from 14-24 credit hours. As with the major, all courses used to complete a minor must have grades of "C" or better and at least half of the requirements should be completed at Alfred University. The appropriate Division Chair should be consulted about matters regarding transfer credits for the minor. Students will also work with an advisor in the minor area in addition to the major advisor.

The requirements and other information for each of these minors can be found by clicking the division links below.

Africana Studies
Arts Management
Astronomy
Biological Anthropology
Biology
Biopsychology
Chemistry
Coaching
Communication Studies
Computer Science
Criminal Justice Studies
Cultural Anthropology
Data Analytics
English
Environmental Studies
Equine Business Management
Exercise Science
Film Studies
French
Geology
Gerontology
Global Studies
History
Literature
Mathematics
Middle Childhood/Adolescent Education
Philosophy
Physics
Planetary Science
Political Science
Psychology

Public Law
Religious Studies
Science Policy
Equestrian Studies
Social Justice Studies
Sociology
Sports Management
Spanish
Women’s and Gender Studies
Writing

Interdisciplinary Minors

Africana Studies

Africana Studies is a cross-disciplinary area of study that is necessarily global in scope and theoretically diverse. This minor offers students a core course to ground their pursuit of African, African American, Afro-Caribbean and Black studies in a survey of the major themes and ideas of the discipline. The remainder of the minor is flexible, allowing students to select courses that match their interests and schedules. These include courses from across campus, including performing arts, sociology, history, political science, literature, environmental science, and special topics courses.

Courses in Africana Studies will include the following learning objectives:

- Recognize and affirm the central place of Africans, African Americans, and Black people in global history and society.
- Explore the contributions of Black and African diasporic peoples to literature, politics, art, history, medicine, science, music, theater, athletics, society, and all disciplines.
- Consider the study of blackness to be central to the intellectual and practical study of any other discipline; Africana studies is not outside of other academic homes, but an integral part of them.
- Understand the radical and politicized origins of the Black and Africana Studies academic units, and to engage in the ongoing debate about its evolving role in higher education curricula.
- Critically engage critical race theory, racism and anti-racism, colorblindness, and other theoretical apparatuses that underpin the discipline of Black and Africana studies.
- Explore the diversity of the African diaspora.
- Partner with communities, on campus and beyond campus, to create practical and synergistic applications for the material learned in the classroom.

Course Requirements

The minor requirements are intentionally flexible to meet the needs and interests of students of a variety of majors, as well as the availability of courses in any given semester.

Students who complete an Africana Studies Minor at Alfred University complete at least 18 credit hours of courses designated or approved for the minor.

Requirements for the Africana Studies Minor
Students must take at least one* of the following:

- PSYC 300 Topics: Psychology of African American Experience - 4 Credits
- HIST 360 Topics: Black History in the U.S. since 1877 - 4 Credits

*Students can take both; the additional course will count toward the remaining 14 credits of the minor.

Students may complete the remaining 14 credits by selecting among the following:

- ENGL 222/SJST 222 The Harlem Renaissance - 4 Credits
- ENGL 434 African-American Literature - 4 Credits
- ENVS 301 Contemporary Topics in Geospatial Technology - 2 Credits
- HIST 360 Topics: Black History in the U.S. since 1877 - 4 Credits
- HIST 377 History of American Slavery - 2 Credits
- SOCI 343 Race and Ethnicity - 4 Credits
- SOCI 355/SJST 355 Power, Privilege, and Inequality - 4 Credits
- SPAN 217 Exiled from Justice: Equatorial Guinean Writers in Africa and Spain - 4 Credits

Total credit hours 18

Arts Management

The Arts Management Minor provides an interdisciplinary approach to the business of art and management of arts organizations. Students have the opportunity to learn and explore the theoretical content and practical skills that engage arts professionals managing individual businesses, serving community arts organizations, and managing not-for-profit arts organizations in the visual, performing, and literary arts. The Arts Management minor is jointly offered by the College of Business, the School of Art and Design, and the College of Liberal Arts and Sciences and is open to all AU students.

Requirements for the Arts Management Minor

- ACCT 211 Financial Accounting - 3 Credits
- BUSI 485 Internship - 1 to 4 Credits
- ECON 201 Principles of Microeconomics - 4 Credits
- MKTG 221 Marketing Principles and Management - 3 Credits

Choose one additional business course from the following:

- BUSI 301 Family Business Management - 3 Credits
- BUSI 439 Entrepreneurship in the 21st Century - 3 Credits

Choose three courses from the following, at least one from each section A and one from section B.

Section A- History and Theory

- ARTH Art History (any course) - 2 to 4 Credits

- DANC 211 Dance History - 4 Credits
- MUSC 110 Music Appreciation - 4 Credits
- MUSC 211 World Music - 4 Credits
- PHIL 283 Philosophy of the Arts I - 4 Credits
- PHIL 300 Topics in Philosophy (consult advisor) - 1 to 4 Credits
- THEA 110 Introduction to Theatre - 4 Credits
- THEA 311 Theatre: History, Art, Politics and Society I - 4 Credits
- THEA 200/300/400 Topics in Theatre (consult advisor) - 1 to 4 Credits

Section B-Applied and Studio Skills Courses

- ART 111 Beginning Drawing - 4 Credits
- ART 121 Beginning Sculpture - 4 Credits
- ART 133 Beginning Photography - 4 Credits
- ART 151 Beginning Ceramics - 4 Credits
- ART 389 Exhibition Design (open only to Art and Design students) - 2 Credits
- DANC Dance (any course) - 1 to 4 Credits
- ENGL 200 Special Topics in Writing - 2 or 4 Credits
- ENGL 202 Fiction Workshop - 4 Credits
- ENGL 205 The Play's the Thing! - Playwriting - 4 Credits
- ENGL 206 Poetry Workshop - 4 Credits
- ENGL 472 Dramatis Personae - 4 Credits
- ENGL 474 Writing the Short Story - 4 Credits
- ENGL 475 Writing Formal Poetry - 4 Credits
- ENGL 476
- PDAT 120 Technical Theatre - 4 Credits
- PDAT 220 Design Fundamentals for Stage, Dance and Film - 4 Credits
- PDAT 270 Play Production - 1 to 4 Credits
- THEA 200/300/400 Topics (consult with advisor) - 1 to 4 Credits

Total credit hours 25-29

Global Studies

Requirements for Global Studies Minor

I. Foundation Courses (required)
Modern Languages: First year competency required. Study Abroad: at least one semester recommended.

- GLBS 101 Introduction to Global Studies - 4 Credits

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

- ANTH 110 Cultural Anthropology - 4 Credits
- HIST 107 The World in the 20th Century - 4 Credits
- POLS 271 World Politics - 4 Credits

Eight additional credits at the 300 or 400 level from the Global Studies electives

Total credit hours 20

Social Justice Studies

Social Justice Studies is an interdisciplinary minor that reflects Alfred University's commitment to social justice and honors the university's roots in 19th century social justice movements. Social justice movements work toward a society characterized by equitable distribution of various kinds of resources (political, economic, cultural, etc.) to all identity groups.

In the Social Justice Studies minor, students develop the tools to analyze and the vocabulary to talk about systems of advantage and disadvantage that perpetuate inequality at the interpersonal, institutional, and cultural level. They acquire familiarity with social movements and strategies that have been used historically to dismantle systemic inequality and to effect social change. They examine their own identities and actions in light of their learning, and engage in experiential learning—getting outside of the classroom environment to develop and implement action plans and then reflecting on their experience.

The course of study includes both the breadth of a team-taught introductory core course and the depth and autonomy of a faculty-supervised capstone experience. Students also take courses from a variety of disciplines and are strongly encouraged to take advantage of experiential learning opportunities.

Requirements for the Minor
Required Core

- SJST 101 Introduction to Social Justice Studies - 4 Credits
- SJST 450 Independent Study - 2 to 4 Credits

Completion of Social Justice Studies Portfolio

Elective Courses
Beyond the core and capstone, students complete 14 credits of electives. At least 10 elective credits must be unique to the SJST minor (i.e., not double-counting toward any other major or minor). Courses available as electives for the minor include: (All are cross-listed as "SJST" in Class Schedules)

- ART 294 Art Force 5: Social Justice Research, Design, Outreach - 2 Credits
- ARTH 382 Gender and Art History: Feminist Art in a Global Frame - 4 Credits
- COMM 465 Gender, Race, Class and Media - 4 Credits
- CRIM 340 Concepts of Penology - 4 Credits
- ECON 425 Wealth and Inequality - 4 Credits
- ENGL 217 Blood, Guts and Alphabets: The Gory Truth about Children's Literature - 4 Credits
- ENGL 222 The Harlem Renaissance - 4 Credits
- ENGL 226 The Holocaust and Literature - 4 Credits
- ENGL 254 Women Writers - 2 or 4 Credits
- ENGL 256 Multicultural American Literature - 4 Credits
- GERO 118 Introduction to Adult Development and Aging - 4 Credits

- HIST 307 Post-World War II America - 4 Credits
- MUSC 216 Queering the Pitch - 2 Credits
- PHIL 304 Equality - 2 Credits
- POLS 242 Approaches to Law - 4 Credits
- POLS 316 American Constitutional Law and Politics - 4 Credits
- POLS 341 Modern Political Theory - 4 Credits
- POLS 346 American Political Thought - 4 Credits
- PSYC 282 Social Psychology - 4 Credits
- PSYC 372 Psychology of Gender - 4 Credits
- SOCI 110 Introduction to Sociology - 4 Credits
- SOCI 344 Sociology of Deviance - 4 Credits
- SOCI 346 Sociology of Sex and Gender - 4 Credits
- SOCI 355 Power, Privilege, and Inequality - 4 Credits
- SOCI 356 Social Movements - 4 Credits
- SPAN 217 Exiled from Justice: Equatorial Guinean Writers in Africa and Spain - 4 Credits
- SPED 456 Human Development: Exceptionality - 3 Credits
- UNIV 115 Concepts of Service Learning - 2 Credits

Total credit hours required 20-22

Concentration

Pre-Professional Advising

Art Therapy
Business
Health Professions
Law

Alfred University provides pre-professional advising for students who wish to prepare for the study of art therapy; law; or health professions, including medicine, dentistry, veterinary medicine, and other allied-health programs. Preparation for these graduate professional programs usually involves taking particular prerequisite courses while an undergraduate. Students may choose to major in anything they wish while taking the prerequisites for these professional programs.

Students with interests in these professional programs should discuss their intentions with their academic advisor and attend workshops and advising hours offered by the faculty advisors for these pre-professional tracks. Depending on the pre-professional track chosen, students may need to start on relevant course work in their first or second year. It takes careful planning to see that both major and pre-professional requirements are completed on schedule. Students interested in pursuing graduate programs in one of the many healthcare fields should consider declaring a Pre-health Sciences Concentration.

Concentration in Pre-health Sciences

The Pre-health Sciences concentration provides students with the core science courses that are a prerequisite for application to most health-related graduate professional programs. Students interested in professions in medicine, dentistry, veterinary

medicine, pharmacy, optometry and other allied health fields may want to pursue this concentration in conjunction with their major. The Pre-health Sciences Concentration, with its breadth of courses in the sciences, provides a solid foundation for advanced courses in the sciences as well as basic science preparation for health professions graduate programs.

While the Pre-health Sciences concentration meets the core science requirements expected for admission to most health-related professional schools, be aware that requirements vary among professional schools and there can be additional requirements (e.g., advanced level courses, minimum grade point average, courses in the humanities or social sciences, internships in the field, etc.). Students are advised to familiarize themselves with these additional requirements, many of which can be fulfilled at Alfred University within the context of an undergraduate degree program.

Visit the Alfred University Pre-professional advising webpage, attend a Pre-health Professions Workshop, and talk with your advisor to take advantage of the multiple resources at AU to assist with preparation for entry into a health-related professional program.

To have this concentration recognized on the final transcript, a minimum grade point average of 3.0 in the courses that satisfy the concentration is required. (Many medical and veterinary schools expect a GPA of 3.5 or higher.)

Required Courses:

- MATH 151 Calculus I - 4 Credits **Or**
  MATH 152 Calculus II - 4 Credits

One Statistics course or a second Math course beyond Precalculus

Suggested courses:

- BIOL 226 Biostatistics - 4 Credits
- POLS/SOCI 230 Introduction to Data Analysis and Statistics - 4 Credits
- PSYC 220 Psychological Methods and Statistics - 4 Credits
- ENVS 205 Environmental Data Analysis - 4 Credits
- MATH 152 Calculus II - 4 Credits
- MATH 381 Mathematical Statistics - 4 Credits

- PHYS 111 Introductory General Physics I - 4 Credits **Or**
  PHYS 125 Physics I - 4 Credits
- PHYS112 Introductory General Physics II - 4 Credits **Or**
  PHYS 126 Physics II - 4 Credits

(note: some health professional schools require a calculus-based physics course)

- BIOL 150 Biological Foundations - 4 Credits
- BIOL 211 Cell Biology - 4 Credits
- BIOL 212 Principles of Genetics - 4 Credits **Or**
  BIOL 213 Structure and Function of Organisms - 4 Credits
- CHEM 105 General Chemistry I - 3 Credits
- CHEM 106 General Chemistry II - 3 Credits

- CHEM 315 Organic Chemistry I - 3 Credits
- CHEM 316 Organic Chemistry II - 3 Credits

Total Credit Hours 44

Pre-professional Advising in Business – 4+1 MBA Program

Students interested in business may take courses or pursue a minor offered by Alfred University's College of Business. Completion of the minor allows students in the College of Liberal Arts & Sciences, who have successfully completed appropriate business courses while undergraduates, to be eligible to enter Alfred University's Masters in Business Administration (MBA) and complete requirements for that degree within one year of receiving the bachelor's degree. For more information about this option, contact the College of Business or the CLAS Dean's Office.

Divisions

Biology

Along with a diverse education in the liberal arts, the BA in biology curriculum facilitates double and co-majors in other disciplines and serves as solid foundation for many career choices. In our 4+1 program with the College of Business, biology majors may leave Alfred University with an MBA. Students interested in the intersection of biology and materials engineering may minor in biomaterials science in the Inamori School of Engineering. Many biology majors also earn minors or majors in chemistry. Those with interest in global and human ecology may participate in the interdisciplinary environmental studies program. An interdisciplinary minor in biopsychology allows majors in biology or psychology to understand the interrelationship of physical and physiologic systems. Students in other disciplines can complete a minor in biology or in biological anthropology, and our biology majors may have minors in a diverse range of STEM and non-STEM fields.

The Division of Biology offers two Bachelor of Science degrees. Built from the same foundation of knowledge as is required for our BA biology students, BS biology students will gain greater experience and knowledge by taking additional courses in organic chemistry, physics, calculus, and elective biology. The BS in Biochemistry provides students with an interdisciplinary approach to solving current biological and chemical problems through courses in biology, biochemistry, organic chemistry, physical chemistry, physics and calculus. These programs will meet the needs of students who plan to enter graduate or professional school in the natural agencies. The designation of concentration areas within the BS Biology major (Human Biology, Plant Biology, Ecology and Evolution, Molecular Biology, Animal Biology) reflect groupings of courses that are relevant to movement towards distinct subdisciplines in the biological sciences.

We have a strong learner-centered focus throughout our curriculum. Students are engaged in course objectives through lectures, laboratory, fieldwork, activities, discussions, and seminars. Our core courses are sequentially designed and integrated to allow students to develop the technical and research skills needed so that they may participate as research collaborators. Our students ask questions, learn how to find answers, and are concerned about the world around them. Many students extend knowledge gained in their courses and design independent research projects, either

in alignment with faculty research projects or to explore their own biological research questions.

Scientific knowledge is used in practical applications throughout the curriculum, as most of our courses include experiential and applied learning opportunities. Several courses include CUREs – curriculum-based undergraduate research experiences – in which students are contributing to and collaborating on novel research questions. Research intensive electives have enrollments limited to 6-8 students, and are designed around investigative questions in the areas of animal behavior, biochemistry, cell biology, microbiology and plant biology, with each student focusing on related but independent research questions. Students enrolled in these courses have the opportunity to present research findings at regional and national meetings, or to participate in manuscript preparation.

Majors

Biology B.A.

Requirements for the major
Each student completes a core of courses and selects a prescribed number of elective courses 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:
Foundation and Core Courses - 26
Specialization Courses - 12
Related Courses - 11-16
Total Credit Hours - 49-54

Foundation and Core Courses
A. Take one of the following:

BIOL 150 Biological Foundations - 4 Credits

BIOL 155 Biological Foundations: Research Project - 4 Credits

B. Take all of the following

BIOL 211 Cell Biology - 4 Credits

BIOL 212 Principles of Genetics - 4 Credits

BIOL 213 Structure and Function of Organisms - 4 Credits

BIOL 226 Biostatistics - 4 Credits

BIOL 314 Community and Systems Biology - 4 Credits

BIOL 390 Junior Seminar - 1 Credit

BIOL 490 Senior Seminar - 1 Credit

Specialization:
Take 12 credit hours. Recommend completion of one research intensive course.

BIOL 300 Topics in Biology - 1 to 4 Credits

BIOL 302 General Microbiology - 4 Credits

BIOL 306 Human Pathophysiology

BIOL 307 Anatomy and Physiology: Nerves, Muscles, Skeleton - 4 Credits

BIOL 308 Anatomy and Physiology: Viscera - 4 Credits

BIOL 315 Genetics and Evolution of Populations - 4 Credits

BIOL 320 Toxicology

BIOL 322 Botany - 4 Credits

BIOL 346 Animal Nutrition - 4 Credits

BIOL 348 Animal Behavior - 4 Credits

BIOL 353 Tropical Biology - 4 Credits

BIOL 354 Ecology - 4 Credits

BIOL 357 Conservation Biology - 4 Credits

BIOL 375 Comparative Vertebrate Anatomy - 4 Credits

BIOL 376 Animal Physiology - 4 Credits

BIOL 402 Immunology - 4 Credits

BIOL 405 Bioinformatics - 4 Credits

BIOL 420 Biochemistry: Proteins and Metabolism - 4 Credits

BIOL 422 Biochemistry: Nucleic Acids - 4 Credits

Research Intensive Electives

BIOL 400 Research Topics - 4 to 5 Credits

BIOL 425 Physiological Plant Ecology - 4 Credits

BA related courses:
Take all courses; additional courses in math and physics are strongly recommended.

CHEM 105 General Chemistry I - 3 Credits

CHEM 105L

CHEM 106 General Chemistry II - 3 Credits

CHEM 106L

CHEM 310 Basic Organic Chemistry - 3 Credits **Or**
CHEM 315 Organic Chemistry I - 3 Credits **And**
CHEM 315L **And**
CHEM 316 Organic Chemistry II - 3 Credits **And**
CHEM 316L

Upon completion of this program a student is able to:

1. Acquire, analyze, and synthesize fundamental knowledge of concepts and principles across all disciplines of biology
2. Recognize and use language and principles appropriate to the biological discipline
    a. Be critical listeners and articulate original questions
3. Communicate fundamental principles as they cross boundaries of traditional biological disciplines
    a. Effectively communicate information in multiple formats

   b. Revise and edit work for clarity, consistence, and coherence
4. Demonstrate thinking and reasoning appropriate to both concrete or abstract concepts
   a. Read and discuss current literature
5. Conduct research, construct hypotheses and/or research questions, and draw conclusions that connect new knowledge to existing knowledge
   a. Know how to search and access biological literature
   b. Perform general laboratory and field techniques competently and safely, including handling of living organisms
   c. Carefully collect and keep research information (lab notebooks and data sheets)
   d. Statistically analyze and interpret data

Biology B.S.

Requirements for the major
Each student completes a core of courses and selects a prescribed number of elective courses related to his/her personal and career interests. Concentrations in Animal Science, Plant Biology, Human Biology, Ecology and Evolution, and Molecular Biology are available. Additional courses in chemistry, mathematics, and physics are required. All courses taken as part of the Biology major must be passed with a grade of C or better.

Summary of Requirements for the B.S. Biology Major:
Foundation and Core Courses - 26
Specialization Courses - 16
Related Courses - 28
Total Credit Hours - 70

Foundation and Core Courses
A. Take one of the following:

BIOL 150 Biological Foundations - 4 Credits

BIOL 155 Biological Foundations: Research Project - 4 Credits

B. Take all of the following:

BIOL 211 Cell Biology - 4 Credits

BIOL 212 Principles of Genetics - 4 Credits

BIOL 213 Structure and Function of Organisms - 4 Credits

BIOL 226 Biostatistics - 4 Credits

BIOL 314 Community and Systems Biology - 4 Credits

BIOL 390 Junior Seminar - 1 Credit

BIOL 490 Senior Seminar - 1 Credit

2. Specialization

Take 16 credit hours. Recommend completion of one research intensive course. To earn a concentration in Animal Science (AS), Biological Sciences (BS), Ecology and

Evolution (EE), Human Biology (HB), Plant Biology (PB), and Molecular Biology (MB), select specialization courses in that concentration area.

Biological Sciences Concentration

BIOL 300 Topics in Biology - 1 to 4 Credits

BIOL 302 General Microbiology - 4 Credits

BIOL 306 Human Pathophysiology

BIOL 307 Anatomy and Physiology: Nerves, Muscles, Skeleton - 4 Credits

BIOL 308 Anatomy and Physiology: Viscera - 4 Credits

BIOL 315 Genetics and Evolution of Populations - 4 Credits

BIOL 320 Toxicology

BIOL 322 Botany - 4 Credits

BIOL 346 Animal Nutrition - 4 Credits

BIOL 348 Animal Behavior - 4 Credits

BIOL 353 Tropical Biology - 4 Credits

BIOL 354 Ecology - 4 Credits

BIOL 357 Conservation Biology - 4 Credits

BIOL 375 Comparative Vertebrate Anatomy - 4 Credits

BIOL 376 Animal Physiology - 4 Credits

BIOL 402 Immunology - 4 Credits

BIOL 405 Bioinformatics - 4 Credits

BIOL 420 Biochemistry: Proteins and Metabolism - 4 Credits

BIOL 422 Biochemistry: Nucleic Acids - 4 Credits

ATHT 392 Biomechanics - 2 Credits

ATHT 393 Physiology of Exercise - 4 Credits

ENVS 315 Herpetology - 3 Credits

ENVS 320 Advanced GIS Applications - 4 Credits

ENVS 330 Ornithology - 4 Credits

Research Intensive Electives

* BIOL 400 Research Topics - 4 to 5 Credits

BIOL 425 Physiological Plant Ecology - 4 Credits

* BS, other concentrations with permission

Animal Science Concentration

Take 16 credit hours. Recommend completion of one research intensive course.

BIOL 320 Toxicology

BIOL 346 Animal Nutrition - 4 Credits

BIOL 348 Animal Behavior - 4 Credits

BIOL 375 Comparative Vertebrate Anatomy - 4 Credits

BIOL 376 Animal Physiology - 4 Credits

ENVS 315 Herpetology - 3 Credits

ENVS 330 Ornithology - 4 Credits

BIOL 400 Research Topics - 4 to 5 Credits (with Permission)

Ecology and Evolution Concentration
Take 16 credit hours. Recommend completion of one research intensive course.

BIOL 315 Genetics and Evolution of Populations - 4 Credits

BIOL 320 Toxicology

BIOL 322 Botany - 4 Credits

BIOL 353 Tropical Biology - 4 Credits

BIOL 354 Ecology - 4 Credits

BIOL 357 Conservation Biology - 4 Credits

BIOL 400 Research Topics - 4 to 5 Credits (with Permission)

BIOL 425 Physiological Plant Ecology - 4 Credits

ENVS 315 Herpetology - 3 Credits

ENVS 320 Advanced GIS Applications - 4 Credits

ENVS 330 Ornithology - 4 Credits

Human Biology Concentration
Take 16 credit hours. Recommend completion of one research intensive course.

BIOL 306 Human Pathophysiology

BIOL 307 Anatomy and Physiology: Nerves, Muscles, Skeleton - 4 Credits

BIOL 308 Anatomy and Physiology: Viscera - 4 Credits

BIOL 320 Toxicology

BIOL 402 Immunology - 4 Credits

BIOL 420 Biochemistry: Proteins and Metabolism - 4 Credits

BIOL 422 Biochemistry: Nucleic Acids - 4 Credits

BIOL 400 Research Topics - 4 to 5 Credits (with Permission)

ATHT 392 Biomechanics - 2 Credits

ATHT 393 Physiology of Exercise - 4 Credits

Molecular Biology Concentration
Take 16 credit hours. Recommend completion of one research intensive course.

BIOL 302 General Microbiology - 4 Credits

BIOL 306 Human Pathophysiology

BIOL 320 Toxicology

BIOL 402 Immunology - 4 Credits

BIOL 405 Bioinformatics - 4 Credits

BIOL 420 Biochemistry: Proteins and Metabolism - 4 Credits

BIOL 422 Biochemistry: Nucleic Acids - 4 Credits

BIOL 400 Research Topics - 4 to 5 Credits (with Permission)

Plant Biology Concentration
Take 16 credit hours. Recommend completion of one research intensive course.

BIOL 320 Toxicology

BIOL 322 Botany - 4 Credits

BIOL 420 Biochemistry: Proteins and Metabolism - 4 Credits

BIOL 422 Biochemistry: Nucleic Acids - 4 Credits

BIOL 300- or 400-level course taken in consultation with academic advisor - 4 Credits

BIOL 400 Research Topics - 4 to 5 Credits (with Permission)

BIOL 425 Physiological Plant Ecology - 4 Credits

Related Courses
Take all of the following:

CHEM 105 General Chemistry I - 3 Credits

CHEM 105L

CHEM 106 General Chemistry II - 3 Credits

CHEM 106L

CHEM 315 Organic Chemistry I - 3 Credits

CHEM 315L

CHEM 316 Organic Chemistry II - 3 Credits

CHEM 316L

MATH 151 Calculus I - 4 Credits

PHYS 111 Introductory General Physics I - 4 Credits **Or**
PHYS 125 Physics I - 4 Credits

PHYS 112 Introductory General Physics II - 4 Credits **Or**
PHYS 126 Physics II - 4 Credits

Biochemistry B.S.

Requirements for the major
Each student completes a core of courses and selects a prescribed number of elective courses related to his/her personal and career interests. Additional courses in mathematics and physics are required. All courses taken as part of the Biochemistry major must be passed with a grade of C or better.

Summary of Requirements for the B.S. Biochemistry Major:
Foundation and Core Courses - 50
Specialization Courses - 8
Related Courses - 16
Total Credit Hours - 74

Foundation and Core Courses
A. Take one of the following:

BIOL 150 Biological Foundations - 4 Credits

BIOL 155 Biological Foundations: Research Project - 4 Credits

B. Take one of the following:

BIOL 212 Principles of Genetics - 4 Credits

BIOL 213 Structure and Function of Organisms - 4 Credits

C. Take all of the following:

BIOL 211 Cell Biology - 4 Credits

BIOL 226 Biostatistics - 4 Credits

BIOL 320 Toxicology

BCHM 390

BCHM 420

BCHM 422

BCHM 490

CHEM 105 General Chemistry I - 3 Credits

CHEM 105L

CHEM 106 General Chemistry II - 3 Credits

CHEM 106L

CHEM 315 Organic Chemistry I - 3 Credits

CHEM 315L

CHEM 316 Organic Chemistry II - 3 Credits

CHEM 316L

CHEM 321 Introduction to Analytical Chemistry - 4 Credits

CHEM 343 Physical Chemistry I - 4 Credits

2. Specialization

Take 8 credits from BIOL, BCHM, or CHEM at the 300- or 400-level, in consultation with academic advisor

3. Related Courses
Take all of the following:

MATH 151 Calculus I - 4 Credits

MATH 152 Calculus II - 4 Credits

PHYS 111 Introductory General Physics I - 4 Credits **Or**
PHYS 125 Physics I - 4 Credits

PHYS 112 Introductory General Physics II - 4 Credits **Or**
PHYS 126 Physics II - 4 Credits

Life and Physical Sciences

If your interests in science are wide-ranging, Alfred University's Life and Physical Sciences major is designed for you. Students looking for an interdisciplinary approach &

a broad scope of education in the sciences enjoy a flexible, balanced curriculum and an ability to concentrate in four distinct tracks.
The Life and Physical Sciences major is offered jointly by the Divisions of Biology, Chemistry and Physics/Astronomy.

Core classes:
Take all of the following:

BIOL 150 Biological Foundations - 4 Credits

CHEM 105 General Chemistry I - 3 Credits

ENVS 101 Environmental Studies I - Natural Science - 4 Credits

MATH 151 Calculus I - 4 Credits

PHYS 111 Introductory General Physics I - 4 Credits **Or**
PHYS 125 Physics I - 4 Credits

Total mandatory breadth core credits: 20

Take one of the following:

GEOL 101 This Dynamic Earth - 4 Credits

GEOL 104 Earth and Life through Time - 4 Credits

GEOL 201 Surficial Geology - 4 Credits

Total Geology elective breadth credits: 4

Total core credits: 24

General Science Track
Take both of the following:

CHEM 106 General Chemistry II - 3 Credits

PHYS 112 Introductory General Physics II - 4 Credits **Or**
PHYS 126 Physics II - 4 Credits

Total mandatory depth credits: 8

Take one of the following:

CSCI 156 Computer Science I - 4 Credits

MATH 152 Calculus II - 4 Credits

Total mandatory supporting field elective credits: 4

Take one of the following:

BIOL 130 Introduction to Human Genetics - 4 Credits

BIOL 207 Introduction to Anatomy and Physiology I - 4 Credits

BIOL 211 Cell Biology - 4 Credits

Total Biology elective depth credits: 4

Take one of the following, not duplicated in core:

ENVS 205 Environmental Data Analysis - 4 Credits

ENVS 220 Introduction to Geographic Information Systems - 4 Credits

GEOL 101 This Dynamic Earth - 4 Credits

GEOL 104 Earth and Life through Time - 4 Credits

GEOL 106 Elementary Oceanography - 4 Credits

GEOL 201 Surficial Geology - 4 Credits

Total ENVS/GEOL elective depth credits: 4

Take remainder of credits from:

Minimum of 10 credits at the 300 level or above from one of the disciplines represented or SCIE - 10 Credits
COMM 101

Total elective depth credits: 10

Total depth credits: 30

Total credits: 54

Scientific Communications Track
Take three of the following:

COMM 101 Introduction to Communication Studies - 4 Credits

COMM 110 Mass Media and American Life - 4 Credits

COMM 205 Introductory Newswriting and Reporting - 4 Credits

ENGR 110 Technical Communications - 4 Credits

Total intro to communications electives credits: 12

Take one of the following:

COMM 200 Special Topics in Communication - 1 to 4 Credits

COMM 302 Public Relations Principles - 4 Credits

COMM 309 Persuasion: Reception and Responsibility - 4 Credits

Total depth communications elective credits: 4

Take one of the following, not duplicated in the core:

BIOL 130 Introduction to Human Genetics - 4 Credits

BIOL 207 Introduction to Anatomy and Physiology I - 4 Credits

BIOL 211 Cell Biology - 4 Credits

CHEM 106 General Chemistry II - 3 Credits

ENVS 205 Environmental Data Analysis - 4 Credits

ENVS 220 Introduction to Geographic Information Systems - 4 Credits

GEOL 101 This Dynamic Earth - 4 Credits

GEOL 104 Earth and Life through Time - 4 Credits

GEOL 106 Elementary Oceanography - 4 Credits

GEOL 201 Surficial Geology - 4 Credits

PHYS 112 Introductory General Physics II - 4 Credits **Or**
PHYS 126 Physics II - 4 Credits

Total science elective breadth course credits: 4

Take remainder of credits from:

Minimum of 10 credits 300 + level courses from Engineering or one of the science Fields (including SCIE) - 10 Credits
CHEM 106

Total depth credits: 30

Total credits: 54

Applied Sciences Track
Take all of the following:

CHEM 106 General Chemistry II - 3 Credits

PHYS 112 Introductory General Physics II - 4 Credits **Or**
PHYS 126 Physics II - 4 Credits

MATH 152 Calculus II - 4 Credits

Total mandatory depth credits: 12

Take both of the following:

ENGR 101 Introduction to Engineering - 2 Credits

ENGR 102 Computer Aided Design - 2 Credits
ENGR 111

Total mandatory engineering breadth credits - 4

Take four of the following:

ENGR 111

ENGR 112

ENGR 113

ENGR 114

ENGR 115

ENGR 116

Total engineering elective breadth credits: 4

Take remainder of credits from the following:

CEMS 203 Introduction to Ceramic Powder Processing - 3 Credits

CEMS 214 Structure and Properties of Materials - 3 Credits

CEMS 314 Ceramic Processing Principles - 3 Credits

CEMS 316 Chemical Processing in Ceramics - 3 Credits

CEMS 318 Refractories - 3 Credits

CEMS 352 Electroceramics - 3 Credits

CEMS 368 Introduction to Bioengineering - 3 Credits

ENGR 210 Discovery and Disaster - 2 Credits

ENGR 305 Engineering Statistics - 3 Credits

ENGR 306 Engineering Economics - 2 Credits

MATH 253 Calculus III - 4 Credits

MATH 271 Differential Equations - 3 Credits

MATH 281 Foundations of Higher Mathematics - 4 Credits

MATH 371 Linear Algebra - 4 Credits

MATH 381 Mathematical Statistics - 4 Credits

MECH 211 Statics - 3 Credits

RNEW 201 Renewable Energy - 3 Credits

RNEW 255 Power System Operation and Economics - 3 Credits

RNEW 303 Software Engineering - 4 Credits

RNEW 310 Fuel Cell Principles and Technology - 3 Credits

SCIE, CHEM, BIOL, PHYS, GEOL, or ENVS 300+ - Var. Credits

Total advanced level elective depth credits (at least 3 must be from engineering): 10

Total depth credits: 30

Total credits: 54

Human Health Sciences Track
Take all of the following:

BIOL 211 Cell Biology - 4 Credits

BIOL 212 Principles of Genetics - 4 Credits

CHEM 105 General Chemistry I - 3 Credits

CHEM 315 Organic Chemistry I - 3 Credits

CHEM 316 Organic Chemistry II - 3 Credits

Total mandatory depth credits: 20

Take a combined minimum of 10 credits from the courses below:

BIOL 302 General Microbiology - 4 Credits

BIOL 307 Anatomy and Physiology: Nerves, Muscles, Skeleton - 4 Credits

BIOL 308 Anatomy and Physiology: Viscera - 4 Credits

BIOL 315 Genetics and Evolution of Populations - 4 Credits

BIOL 420 Biochemistry: Proteins and Metabolism - 4 Credits

* BIOL 400 Research Topics - 4 to 5 Credits

** CHEM 400 Advanced Chemistry Topics - 1 to 4 Credits

* Up to 10 credits may be completed in a medical, dental, or pharmacy program that Alfred has an articulation agreement with. Prior approval is mandatory.
** Must be approved.

Total elective depth credits: 10
Total depth credits: 30
Total credits: 54
Additional requirements:
Minimum GPA 3.4

Minors

Biology

Requirements for the Biology minor

A total of 24 credits is required for the Biology minor.

Take both of the following courses:

Required Courses
A. Take one of the following:

BIOL 150 Biological Foundations - 4 Credits

BIOL 155 Biological Foundations: Research Project - 4 Credits

Plus at least 16 additional credits of BIOL courses (excluding BIOL 226, 390, 450, 485, and 490), selected in consultation with a Biology advisor.
Total credit hours 24

B. Take CHEM 105:

CHEM 105 General Chemistry I - 3 Credits

Biological Anthropology

The interdisciplinary minor in Biological Anthropology requires foundation courses in Biology and Anthropology. The minor is intended to complement a major in another discipline. (See Social Sciences Division section for the list of required courses.)

Biopsychology

You'll understand the science behind human behavior and how the body and mind work together. The best of our psychology and biology courses are combined to provide you with a well-rounded program to assist you as you pursue graduate school or a career in a science-related profession.

Requirements For The Biopsychology Minor

A. Biology Core
Complete the following:

BIOL 211 Cell Biology - 4 Credits

Complete one of the following:

BIOL 207 Introduction to Anatomy and Physiology I - 4 Credits **Or**
BIOL 307 Anatomy and Physiology: Nerves, Muscles, Skeleton - 4 Credits

BIOL 307 Anatomy and Physiology: Nerves, Muscles, Skeleton - 4 Credits

Complete one of the following:

BIOL 130 Introduction to Human Genetics - 4 Credits **Or**
BIOL 212 Principles of Genetics - 4 Credits

BIOL 212 Principles of Genetics - 4 Credits

B. Psychology Core
Take all of the following:

PSYC 311 Sensation and Perception - 4 Credits

PSYC 322 Health Psychology - 2 to 4 Credits

PSYC 330 Neuropsychology - 4 Credits

C. Advanced Application
Take 4 credit hours from the following:

BIPY 485 Practicum or Internship - 1 to 4 Credits

BIPY 499 Thesis - 1 to 4 Credits

Total credit hours 28

Preparation For Middle/Adolescent Education

Future science teachers complete the Biology major (49-54 credits), and should consult with faculty advisors in Biology and Education to select appropriate courses in biology and related disciplines.

Chemistry

Chemistry is a broad field and knowledge of chemistry is essential to the student in other sciences, medicine, or engineering as well as to the person who wishes to be liberally educated. With many scientific issues facing today's society, knowledge of chemistry and science are crucial.

The Division offers a core B.A. degree, an American Chemical Society (ACS) approved degree, and an interdisciplinary B.S. in Chemistry with at least ten upper-level credits in other disciplines of science, engineering, or math at the 200 level or higher. The core B.A. provides a unique experience that links fundamental knowledge in the classroom with hands-on exploration in the laboratory. We stress the importance of undergraduate research experiences for our students, whether on or off campus.

Students with a chemistry degree from Alfred University graduate with a firm background for entry into the job market as a chemist, for graduate degrees in the discipline, for advanced study in a related discipline or success in professional schools of pharmacy, medicine, dentistry, veterinary medicine, law, or library science. The ACS approved degree requires the core B.A. degree in Chemistry plus a total six additional semester credit hours, 4 of which must include Biochemistry: Proteins and Metabolism.

A minor in chemistry is also offered and integrates well with several majors on campus. The minor not only provides breadth of knowledge, but also permits the student to tailor their studies to complement a major in other fields. For example, a biology major might emphasize organic chemistry whereas a person in ceramic engineering might focus on physical, inorganic, or analytical chemistry.

Majors

Major In Chemistry

Requirements for the Major

CHEM 105/106 General Chemistry - 8 Credits

CHEM 315/316 Organic Chemistry - 8 Credits

CHEM 321 Introduction to Analytical Chemistry - 4 Credits

* CHEM 343/346 Physical Chemistry I and II - 7 Credits

CHEM 345 Physical Chemistry Laboratory - 1 Credit

CHEM 372 Inorganic Chemistry - 3 Credits

CHEM 374 Inorganic Chemistry Laboratory - 1 Credit

CHEM 423 Instrumental Analysis - 3 Credits

CHEM 461 Advanced Chemistry Laboratory I - 2 Credits

** CHEM 490 Chemistry Seminar - 0 Credits

* Ceramic Engineering and Materials Science majors who also major in Chemistry may take CEMS 214, 235 and 344 for equivalent content. Other substitutions for courses in the major for students pursuing double majors can be approved by the Division on a case by case basis.
** Enrollment in three semesters of chemistry seminar is required for all majors.

Total credit hours 38

Upon completion of this program a student is able to:

1. Exhibit a high degree of intellectual curiosity.
2. Solve problems efficiently and effectively,
3. Communicate effectively with professional and lay audiences,
4. Exhibit a passion for their chosen vocation,
5. Demonstrate a fundamentally sound knowledge of chemistry,
6. Exhibit superior preparation for obtaining a terminal degree in their field,
7. Understand the place of chemistry within natural science, and
8. Comprehend the relationship between natural science, the environment, and the rest of human culture.

Requirements For The ACS Approved Chemistry Major

The Chemistry major plus six additional credit hours. These six credits must include BIOL/BCHM/CHEM 420 (Biochemistry: Proteins and Metabolism) and at least two credit hours from CHEM 400, BIOL/BCHM/CHEM 422, or other upper level Chemistry, Biochemistry, or Ceramic Engineering courses when appropriate. An additional 24 clock hours of laboratory time/research is also required.

Related Study Required for the Major

MATH 151/152 Calculus I and II - 8 Credits

PHYS 111 Introductory General Physics I - 4 Credits **Or**
PHYS 125 Physics I - 4 Credits

PHYS 112 Introductory General Physics II - 4 Credits **Or**
PHYS 126 Physics II - 4 Credits

For those students who wish to earn the ACS certified degree, BIOL 150 and BIOL 211 are required prerequisites for BIOL 420.

Requirements for the B.S. Degree

Requirements for the B.A. in Chemistry plus at least ten upper level credits (200 Level or Higher), at least two courses of which must be in one field.

Upper Level Courses in Science, Engineering or Math (At least 10 credits required, at least 2 classes in 1 field)

Upper Level Courses in Science, Engineering or Math
(At least 10 credits required, at least 2 classes in 1 field)

BIOL 211 Cell Biology - 4 Credits

BIOL 212 Principles of Genetics - 4 Credits

BIOL 302 General Microbiology - 4 Credits

BIOL 307 Anatomy and Physiology: Nerves, Muscles, Skeleton - 4 Credits

BIOL 308 Anatomy and Physiology: Viscera - 4 Credits

BIOL 420 Biochemistry: Proteins and Metabolism - 4 Credits

CEMS 214 Structure and Properties of Materials - 3 Credits

CEMS 216 Bonding and Structure of Materials - 3 Credits

CEMS 314 Ceramic Processing Principles - 3 Credits

CEMS 322 Introduction to Glass Science - 3 Credits

CEMS 347 Spectroscopy - 2 Credits

ENVS 240 Environmental Research Procedures I - 3 Credits

ENVS 241 Environmental Research Procedures II - 3 Credits

ENVS 351 Environmental Biogeochemistry - 4 Credits

GEOL 201 Surficial Geology - 4 Credits

GEOL 301 Structural Geology - 4 Credits

GEOL 302 Mineralogy and Petrology - 4 Credits

GEOL 307 Stratigraphy and Sedimentation - 4 Credits

MATH 253 Calculus III - 4 Credits

MATH 271 Differential Equations - 3 Credits

MATH 371 Linear Algebra - 4 Credits

MECH 320 Thermodynamics I - 3 Credits

MECH 321 Thermodynamics II - 3 Credits

PHYS 326 Elementary Modern Physics - 3 Credits

PHYS 401 Quantum Mechanics I - 4 Credits

PHYS 402 Quantum Mechanics II - 4 Credits

Total credit hours 63 or more

Life and Physical Sciences

The Life and Physical Sciences major is offered jointly by the Divisions of Biology, Chemistry and Physics/Astronomy.

Minor

Requirements For The Chemistry Minor

CHEM 105/106 General Chemistry - 8 Credits

Plus at least 12 additional credits from the following:
CHEM 310 (may not be credited if passing grade in CHEM 315), CHEM 313, CHEM 315, CHEM 316, CHEM 321, CHEM 343, CHEM 345, CHEM 346, CHEM 370, CHEM 372, CHEM 374, CHEM 400, CHEM 423, and CHEM/BIOL 420

Total credit hours 20

Note: Up to a total of nine credit hours may be taken outside of the Division of Chemistry, and courses that count towards the chemistry minor outside of the Division include: CEMS 214, CEMS 235, CEMS 344, CEMS 347, CEMS 349, PHYS 401, PHYS 421, MECH 320, MECH 321, MECH 241

Communication Studies

The core courses examine elements of the process of communication in a program which is grounded in the humanistic tradition and contemporary social science. This plan of study is designed not only for students planning to pursue careers as leaders in fields such as public relations, journalism, and advertising, but also for those who wish to acquire an awareness of general communication 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 Communication 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, or the campus television station, AUTV, as well as complete an internship.

Major

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 Credits

COMM 110 Mass Media and American Life - 4 Credits

COMM 205 Introductory Newswriting and Reporting - 4 Credits

COMM 301 Broadcasters, Advertisers, and Audiences - 4 Credits

COMM 309 Persuasion: Reception and Responsibility - 4 Credits

COMM 410 Communication Ethics - 4 Credits

Additional Requirements
Take 20 credit hours of elective courses in Communication, Social Sciences (such as Psychology or Political Science), Business (such as Management or Marketing), and Humanities (such as English), chosen in consultation with an advisor. At least 12 of these elective hours must be at the 300-400 level.

Total credit hours 44

Upon completion of this program a student is able to:

1. Identify different forms of communication and the purposes, strategies, and processes that underpin them.
    a. Recognize that communication draws from both the humanities and social sciences in its expressive, analytical and critical dimensions.
    b. Understand the roles of the components of Communication (Senders, Messages, Channels, and Receivers) as conceptualized by various models of communication.
    c. Articulate the rhetorical impact of communication in how language "creates reality."
    d. Understand the impact of communication technologies on personal, social and cultural levels.
2. Construct and deliver messages to defined and identifiable audiences.
    a. Articulate and organize written and oral messages effectively and tailor them to the mode of communication.
    b. Demonstrate an understanding of various forms of mass media and communication technologies.
    c. Analyze interpersonal, group, organizational, public, and mass-mediated messages.
    d. Understand the importance of audience adaptation when communicating messages.
    e. Construct and critique persuasive arguments.
3. Analyze and evaluate the purposes and impacts of human communication within and across various social contexts.
    a. Recognize the interconnectedness of interpersonal, organizational, and intercultural relationships.
    b. Articulate the role of communication in the construction of culture.
    c. Recognize how culture affects the ways in which we communicate.
    d. Understand the ethical issues in communication.
4. Apply knowledge and skills via practical experiences.
    a. Explore at least one academic discipline beyond Communication.
    b. Earn experience via experiential learning opportunities or internships.
    c. Illustrate knowledge and skills via creative and/or academic research.

Minors

Requirements For The Minor In Film Studies

COMM 215 Introduction to Film Studies - 4 Credits

COMM 304 History of the Motion Picture - 4 Credits

Select 12 credits of electives in consultation with advisor

Upper-level courses (300- and 400-level) preferred

Total credit hours 20

Requirements For The Minor In Communication Studies

COMM 101 Introduction to Communication Studies - 4 Credits

COMM 110 Mass Media and American Life - 4 Credits

COMM 205 Introductory Newswriting and Reporting - 4 Credits

COMM 301 Broadcasters, Advertisers, and Audiences - 4 Credits

COMM 309 Persuasion: Reception and Responsibility - 4 Credits

COMM 410 Communication Ethics - 4 Credits

Total credit hours 24

Computer Science

The mathematics and computer science program serves a variety of purposes:

- Maintaining a dynamic and flexible program for mathematics, computer science, and actuarial science majors
- Providing the mathematical foundation for engineering and science students
- Providing the computer science foundation for data science, data analytics, and business analytics students
- Offering an introduction to quantitative reasoning for liberal arts, education, and business students
- Emphasizing applications to real-world problems from a variety of disciplines
- Enhancing degrees in other disciplines through minors in mathematics, computer science, and data science

Prepare for an exciting career
The study of mathematics and computer science can lead to an exciting career in a variety of professional areas, including scientific research, engineering, finance, software development, actuarial science, data science, industry, business, education, and government service. Because of the wide range of uses for mathematics and computer science, and the need for those who are skilled in these disciplines, employment prospects are excellent.
Help solve important problems
Mathematicians and computer scientists help create, understand, and analyze mathematical and computer models that deal with some of the most important problems

of our time, such as climate change, medical research, human behavior, internet security, and new energy resources.

Discover the worlds within and around us

When viewed as abstract disciplines, mathematics and computer science are appreciated for their intrinsic beauty; they help develop fundamental theories that provide order, certainty, and truth on both logical and intellectual levels. As applied sciences, mathematics and computer science are appreciated for their ability to describe pattern, symmetry, and change, and for their power to predict, infer, simulate, and optimize real events and natural phenomena.

Major

Bachelor of Arts in Computer Science

The Bachelor of Arts (BA) degree in computer science allows for an abundance of free general electives through which students can explore a variety of other interests and experience the diversity of a liberal arts education. It is a great option when pursuing one or more minors or a double major, and it opens up a world of exceptional career opportunities.

Requirements for the Bachelor of Arts major in Computer Science:

CSCI 156 Computer Science I - 4 Credits

CSCI 157 Computer Science II - 4 Credits

CSCI 205 Database Systems - 4 Credits

CSCI 206 Algorithm Design - 4 Credits

CSCI 225 Computer Organization - 4 Credits

CSCI 315 Computer Networking - 4 Credits

MATH 131 Discrete Mathematics - 4 Credits

MATH 151 Calculus I - 4 Credits

- Plus 13 credit hours of computer science courses and electives, at least 8 of which must be 400-level.

Electives for the Bachelor of Arts major in Computer Science:

ENGR 471 Genetic Algorithms - 3 Credits

MATH 305 Theory of Computation - 4 Credits

MATH 351 Introduction to Operations Research - 4 Credits

MATH 371 Linear Algebra - 4 Credits

MATH 381 Mathematical Statistics - 4 Credits

MECH 435 Industrial Control via Microcontroller - 3 Credits

RNEW 303 Software Engineering - 4 Credits

- Other elective courses may be approved with Division permission.

All major courses must be passed with a grade of C or better.

Total credit hours 45

Upon completion of this program a student is able to:

- Understand and apply problem-solving techniques
- Read, write, and analyze computer algorithms and code
- Communicate computer science knowledge both orally and in writing
- Understand concepts and applications from a broad range of areas
- Understand the ethical ramifications of implementing computational solutions

Minors

Computer Science Minor

The minor in computer science provides students with a broad introduction to modern programming, web development, and software engineering.

Requirements for the minor in Computer Science:

CSCI 156 Computer Science I - 4 Credits

CSCI 157 Computer Science II - 4 Credits

CSCI 205 Database Systems - 4 Credits

CSCI 206 Algorithm Design - 4 Credits

- Plus 8 credit hours of computer science courses and electives, selected in consultation with the computer science minor advisor.

Electives for the minor in Computer Science:

ENVS 220 Introduction to Geographic Information Systems - 4 Credits

ENVS 320 Advanced GIS Applications - 4 Credits

MATH 131 Discrete Mathematics - 4 Credits

MATH 231 Introduction to Data Science - 4 Credits

MATH 281 Foundations of Higher Mathematics - 4 Credits

MATH 305 Theory of Computation - 4 Credits

PHIL 282 Introduction to Logic - 4 Credits

RNEW 303 Software Engineering - 4 Credits

- Other elective courses may be approved with Division permission.

All minor courses must be passed with a grade of C or better.
At least half of the required minor credits must be completed at Alfred University.
Total credit hours 24

Data Science Minor

Innovations in technology have led to a substantial growth in available data that must be aggregated, manipulated, integrated, and analyzed. The minor in Data Science gives

students an overview of big data and the techniques for handling it. This minor is an asset to any discipline involving data-driven analysis and inference.

Requirements for the minor in Data Science:

CSCI 156 Computer Science I - 4 Credits

CSCI 205 Database Systems - 4 Credits

MATH 151 Calculus I - 4 Credits

MATH 231 Introduction to Data Science - 4 Credits

- Plus 6-8 credit hours of electives, selected in consultation with the data science minor advisor.

Electives for the minor in Data Science:

BIOL 226 Biostatistics - 4 Credits

BIOL 405 Bioinformatics - 4 Credits

BUSI 113 Descriptive Analytics & Statistics - 3 Credits

ENGR 305 Engineering Statistics - 3 Credits

ENVS 205 Environmental Data Analysis - 4 Credits

ENVS 220 Introduction to Geographic Information Systems - 4 Credits

MATH 351 Introduction to Operations Research - 4 Credits

MATH 371 Linear Algebra - 4 Credits

MATH 381 Mathematical Statistics - 4 Credits

MKTG 452 Market Research - 3 Credits

POLS/SOCI 230 Intro to Data Analysis and Statistics - 4 Credits

- Other elective courses may be approved with Division permission.

At most one statistics course may be applied toward the minor.
All minor courses must be passed with a grade of C or better.
At least half of the required minor credits must be completed at Alfred University.
Total credit hours 22-24

Education

Housed in the Division of Education is a major in Early Childhood/Childhood Education and minors in Adolescent, Visual Arts, and Business Education. Students enrolled in these programs receive an integrated blend of professional course work and field-based opportunities, and fulfill requirements for Initial Certification in New York State. Various Adolescent content certifications (Grades 7-12) are available including Biology, Chemistry, Earth Science, English, Mathematics, Physics, Social Studies, and Spanish with an option to add Middle Childhood (Grades 5-9) certification with additional coursework and field experiences. Refer to the Graduate School Catalog for information on graduate programs offered by the Division of Education.

Major

Education Major: Early Childhood/Childhood Education

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 enables them to apply theory to classroom situations. These field-based experiences expose students to a diversity of educational environments.

Students completing the program meet the academic requirements of the New York State Education Department for certification in Early Childhood (Birth - 2nd grade) and Childhood Education (1st - 6th grade).

The Early Childhood/Childhood Education major requires coursework in the arts and sciences that is rich in breadth and depth, and fulfills requirements in basic competencies and areas of knowledge in the following subjects: artistic expression, communication, information retrieval, humanities, language other than English, written analysis and expression, concepts in history and social sciences, and scientific and mathematical processes.

Academic Area Of Concentration (Or Second Major)

Students majoring in Early Childhood/Childhood Education must complete 30 credit 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 concentration areas include Biology, Chemistry, English, Environmental Studies, Geology, History, Mathematics, Natural Science (Biology, Chemistry, Environmental Studies, Geology and Physics), Physics, Political Science, Psychology, Sociology, and Spanish. Coursework in the academic area of concentration must represent breadth (100-200 level courses) and depth (300-400 level courses) in the content area.

Prerequisite Courses
Prerequisite Courses

EDUC 105 Education Perspectives - 1 Credit

EDUC 230 Psychological Foundations of Education - 3 Credits

EDUC 231 Social Foundations of Education - 3 Credits

SPED 456 Human Development: Exceptionality - 3 Credits

MATH 102 Mathematics for Teachers: Grades K-6 - 4 Credits

Continuing Enrollment Requirements

Students may establish their major in Education upon admission to the College of Liberal Arts and Sciences. At the beginning of their junior (3rd) year, students are reviewed for continued enrollment in the Early Childhood/Childhood Education Major. At this time, students must have declared Education as their major, met with their Education advisor to ensure that all prerequisites have been met, earned an overall 2.75 GPA, and achieved a 3.0 GPA in each of the prerequisite education courses

(EDUC 230 and EDUC 231). Students must also successfully complete a Progress Interview with Education faculty members before being allowed to proceed in the major.

The Education portion of the program starts in the spring semester of the student's junior year, and includes fieldbased 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 is 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. 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.

Students will need transportation to area school districts for both field placements (spring semester) and student teaching (fall semester) placements. Students must earn a grade of C or higher in all Education and Special Education courses, as well as in all content core courses required for teacher certification.

Core Courses
Core Courses

EDUC 374 Integrated Methods: Social Studies, Science, Mathematics, and Computer Application - 6 Credits

EDUC 375 Early Childhood/Childhood Practicum - 3 Credits

EDUC 471 Methods of Teaching Literacy - 6 Credits

EDUC 474 Orientation to the Early Childhood/Childhood Classroom - 3 Credits

EDUC 461 Student Teaching for Early Childhood/Childhood Certification - 12 Credits

EDUC 472 Competency Skills in Teaching Literacy - 3 Credits

EDUC 473 Assessment in the Early Childhood/Childhood Classroom - 3 Credits

Minors

Education Minors: Adolescence Education (Grades 7-12) With Option To Add Middle Childhood (Grades 5-9) Special Subjects: Visual Arts Or Business And Marketing (Pre K - 12th Grade)

Students completing these programs meet the academic requirements of the New York State Education Department for Initial certification.

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 diversity 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: artistic expression, communication, information retrieval, humanities, language other than English, written analysis and

expression, concepts in history and social sciences, and scientific and mathematical processes.

Preparation for a teaching certification in Adolescence Education combines an academic major in a particular field, such as English or Biology, with an Adolescence minor in the Division of Education. Adolescence Education subjects include Biology, Chemistry, Earth Science, English, Mathematics, Physics, Social Studies, and Spanish; students must be enrolled in the College of Liberal Arts and Sciences in one of these majors.

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

Students seeking certification in Visual Arts must be enrolled in the BFA program in the School of Art and Design or the Interdisciplinary Art program in the College of Liberal Arts and Sciences 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 - 3 Credits

EDUC 231 Social Foundations of Education - 3 Credits

Continuing Enrollment for Education Minors

In year 1, students are encouraged to declare their minor in Education and complete the prerequisite courses (EDUC 230 and EDUC 231). The semester prior to taking the appropriate Methods course (EDUC 489 or 491), students are reviewed for continued enrollment in the Education Minor. At this time, students must have declared Education as their minor and met with their Education advisor to ensure that all prerequisites have been met, that they have an overall 2.75 GPA, and have achieved a 3.0 GPA in each of the prerequisite education courses (EDUC 230 and EDUC 231). Students must also successfully complete a Progress Interview with Education faculty members before being allowed to proceed in the minor.

Course Requirements

- Completion of Basic Competencies and Areas of Knowledge required for Liberal Arts and Sciences.
- Completion of appropriate academic major in the College of Professional Studies, College of Liberal Arts and Sciences, or School of Art and Design.

Adolescent and Business Education Specific with course list Pedagogical Core

EDUC 345 Education Fieldwork - 3 Credits

EDUC 405 Literacy in the Content Area - 3 Credits

EDUC 413 Using Literature in Intermediate and Adolescent Classrooms - 3 Credits

EDUC 460 Seminar in Teaching and Professional Development - 3 Credits

EDUC 462 Student Teaching for Middle/Adolescent Certification - 12 Credits

EDUC 489 Current Teaching Methods: Adolescent Subjects - 3 Credits

SPED 456 Human Development: Exceptionality - 3 Credits

Plus specific general education core courses required for each New York State teacher certification.

Middle Childhood Certificate

Those Adolescent education students who wish to earn an additional certification in Middle Childhood must also complete EDUC 488 - Current Teaching Methods: Middle Childhood Subjects as well as additional fieldwork and student teaching hours in Middle Childhood placements.

Visual Arts Specific Pedagogical Core with course list

EDUC 345 Education Fieldwork - 3 Credits **Or**
EDUC 405 Literacy in the Content Area - 3 Credits

EDUC 405 Literacy in the Content Area - 3 Credits **Or**
EDUC 413 Using Literature in Intermediate and Adolescent Classrooms - 3 Credits

EDUC 464 Seminar in Professional Development: Visual Arts - 3 Credits

EDUC 463 Student Teaching-Art Education - 12 Credits

EDUC 491 Methods and Curriculum in Art Education - 3 Credits

SPED 456 Human Development: Exceptionality - 3 Credits

Plus specific general education core courses required for New York State teacher certification.

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

Examinations:

- Academic Literacy Skills Test (ALST):
  - Must be passed prior to Progress Interview
- Content Specialty Test (CST):
  - The appropriate Content Specialty Test(s) for the appropriate developmental level(s) and certification area(s) must be passed prior to Progress Interview
- Educating All Students (EAS):
  - Must be passed prior to student teaching
- Teacher Performance Assessment (edTPA):
  - Completed during the student teaching semester; must be passed before a student will be recommended for certification

New York State Mandated Workshops:

All students must complete state required workshops in Child Abuse Identification and Reporting, School Violence Prevention and Intervention, and Training in Harassment, Bullying, Cyberbullying, and Discrimination in Schools: Prevention and Intervention (Dignity for All Students).

Fingerprinting/Background Check:

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

English

The mission of the Division of English is to offer instruction in the western canon and non-canonical and world literatures, integrating these studies with creative writing courses in poetry, fiction, nonfiction and playwriting. The Division of English is dedicated to the teaching of analysis, critical reflection and creative thought, problem solving, and communication within the context of a liberal arts education in order to meet the complex needs of a diverse university community.

We encourage students to recognize the intellectual, social, and historical contexts of human experience, demonstrating how we might question and articulate the values, ideologies, and assumptions inherent in any human enterprise. We are also committed to teaching all university students the analytic writing skills they need in order to articulate a cultural literacy in an ever-shrinking, diverse world.

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, a total of 44 semester hours in English is required.

Major

English

Requirements for the English Major

One 200-level literature class ("A" Area of Knowledge) - 4 Credits

ENGL 325 Survey of British Literature I - 3 Credits

ENGL 326 Survey of British Literature II - 3 Credits

ENGL 327 Survey of American Literature - 4 Credits

ENGL 328 The Language of Literary Art - 4 Credits

* 400-level coursework in writing and literature - 26 Credits

* Note: ENGL 450-Independent Study does not count toward the major. ENGL 496-English Honors Thesis may be counted toward the major. Also, the Division of English

strongly recommends that English majors complete the intermediate level of a foreign language. Students may count one literature course (300-level or above) taken in a foreign language towards the English major.

Total credit hours 44

Upon completion of this program a student is able to:

1. Articulate in discussion and on paper how texts communicate more than their surface-level meanings
2. Identify dominant themes and concerns in the subject matter
3. Use historical, literary, and critical contexts to analyze texts
4. Recognize conventions associated with different genres and explain the significance of those conventions
5. Effectively support analytical claims with textual evidence
6. Put texts in dialogue, finding their shared assumptions and points of departure
7. Use writing to discover (not just report) what they think.

Minors

The English Division offers minors in English, Literature, and Writing. For students wishing to complete more than one minor offered by the English Division, each minor must have at least 12 unique credits.

English

Requirements for a Minor in English

Any 200-level writing or literature course in English - 4 Credits

ENGL 325 Survey of British Literature I - 3 Credits **And**
ENGL 326 Survey of British Literature II - 3 Credits **Or**
ENGL 327 Survey of American Literature - 4 Credits **Or**
ENGL 328 The Language of Literary Art - 4 Credits

* 400-level writing and/or literature coursework - 10 to 12 Credits

Total Credit Hours 20

* Note: ENGL 450-Independent Study does not count toward the English minor

Literature

Requirements for a Minor in Literature

One 200-level literature class (“A” Area of Knowledge) - 4 Credits

ENGL 325 Survey of British Literature I - 3 Credits **And**
ENGL 326 Survey of British Literature II - 3 Credits **Or**
ENGL 327 Survey of American Literature - 4 Credits

* 400-level coursework in literature - 10 to 12 Credits

Total Credit Hours 20

* Note: ENGL 450-Independent Study does not count toward the Literature minor

Writing

Requirements for a Minor in Writing

One 200-level creative writing class - 4 Credits

ENGL 328 The Language of Literary Art - 4 Credits

* 400-level writing courses - 12 Credits

Total Credit Hours 20

* Note: ENGL 450-Independent Study does not count toward the Writing minor

Environmental Studies and Geology Division

Majors

Note: Nearby Alfred State College offers a number of applied courses in a variety of environmental areas. With permission, selections from among these offerings may be taken through a cross-registration agreement. Advisors can assist in such course selections; in some cases these may substitute for courses listed above.

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.

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

The primary missions of the Environmental Studies Program at Alfred University are to educate our students and to engage in research that furthers our understanding of the natural environment. These two activities are mutually supportive.

Our approach toward teaching and research is to integrate the several disciplines in the natural and social sciences and humanities that make up the field. We practice the team approach taken in modern environmental problem solving in both teaching and research. Our students learn to tackle environmental problems as a team of experts, each contributing his/her own specialty to the group effort.

We use contemporary methods of “learning by doing” and team-teaching to provide our students with a multi-faceted, practical foundation that they can build on with advanced study or work experience. We strive to provide the latest technologies for our students, and orient our curriculum in such a way as to give them experience using contemporary procedures, approaches, techniques, and instruments. We expect our students to graduate with a good understanding of theoretical aspects of our field and the ability to apply that understanding to practical situations. Our goal is to prepare students for rigorous graduate programs and/or to be successful in a competitive job market.

Our faculty engage in scholarly activities that lead to a better understanding of the environment and the effects that humans have on the environment. We often work on research projects in teams and expect our students to be involved in research with us whenever possible, depending on the nature of specific research projects.

When appropriate, we use our expertise to benefit the local community and undertake research projects with our students that will have a positive impact on the local environment.

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

ENVS 101 Environmental Studies I - Natural Science - 4 Credits

ENVS 205 Environmental Data Analysis - 4 Credits **Or**
POLS/SOCI 230 Introductory Data Analysis and Statistics - 4 Credits **Or**
PSYC 220 **Or**
BUSI 113

ENVS 206 Fieldcraft-Outdoor Proficiency - 4 Credits

ENVS 214 Environment, Politics and Society - 4 Credits

ENVS 220 Introduction to Geographic Information Systems - 4 Credits

ENVS 240 Environmental Research Procedures I - 3 Credits

ENVS 241 Environmental Research Procedures II - 3 Credits

ENVS 360 Junior Seminar - 1 Credit

ENVS 415 Natural Resources Management - 3 Credits

ENVS 440 Environmental Research Planning - 2 Credits

ENVS 490 Senior Seminar - 2 Credits

ENVS 499 Senior Project in Environmental Studies - 2 to 4 Credits

B. Breadth requirement
One course from among the following:

BIOL 150 Biological Foundations - 4 Credits

CHEM 105 General Chemistry I - 3 Credits

GEOL 101 This Dynamic Earth - 4 Credits

PHYS 111 Introductory General Physics I - 4 Credits **Or**
PHYS 125 Physics I - 4 Credits

Two courses from among the following:

ANTH 110 Cultural Anthropology - 4 Credits

ECON 201 Principles of Microeconomics - 4 Credits

ENGL 293 Writers Gone Wild: Literature and the Environment - 4 Credits

HIST 308 Americans and Their Environments - 4 Credits

PHIL 281 Ethics - 4 Credits

POLS 411 Bureaucracy - 4 Credits

C. Natural Science emphasis electives
Three courses (at least 11 credits) from among those listed, with no more than two 100-level courses.

BIOL 322 Botany - 4 Credits

BIOL 354 Ecology - 4 Credits

CHEM 106 General Chemistry II - 3 Credits

CHEM 310 Basic Organic Chemistry - 3 Credits **Or**
CHEM 315 Organic Chemistry I - 3 Credits

CHEM 316 Organic Chemistry II - 3 Credits

CHEM 321 Introduction to Analytical Chemistry - 4 Credits

ENVS 300 Special Topics - 1 to 4 Credits

ENVS 315 Herpetology - 3 Credits

ENVS 320 Advanced GIS Applications - 4 Credits

ENVS 330 Ornithology - 4 Credits

ENVS 351 Environmental Biogeochemistry - 4 Credits

ENVS 357 Conservation Biology - 4 Credits

GEOL 201 Surficial Geology - 4 Credits

GEOL 301 Structural Geology - 4 Credits

GEOL 307 Stratigraphy and Sedimentation - 4 Credits

GEOL 464 Hydrogeology - 4 Credits

PHYS 112 Introductory General Physics II - 4 Credits **Or**
PHYS 126 Physics II - 4 Credits

Requirements for the major – Social Science Emphasis

A. Core requirements

ENVS 101 Environmental Studies I - Natural Science - 4 Credits

ENVS 205 Environmental Data Analysis - 4 Credits **Or**
POLS/SOCI 230 Intro Data Analysis and Statistics - 4 Credits **Or**
PSYC 220 **Or**
BUSI 113

ENVS 206 Fieldcraft-Outdoor Proficiency - 4 Credits

ENVS 214 Environment, Politics and Society - 4 Credits

ENVS 220 Introduction to Geographic Information Systems - 4 Credits

ENVS 240 Environmental Research Procedures I - 3 Credits

ENVS 241 Environmental Research Procedures II - 3 Credits

ENVS 360 Junior Seminar - 1 Credit

ENVS 415 Natural Resources Management - 3 Credits

ENVS 440 Environmental Research Planning - 2 Credits

ENVS 490 Senior Seminar - 2 Credits

ENVS 499 Senior Project in Environmental Studies - 2 to 4 Credits

B. Breadth requirements
One course from among the following:

BIOL 150 Biological Foundations - 4 Credits

CHEM 105 General Chemistry I - 3 Credits

GEOL 101 This Dynamic Earth - 4 Credits

PHYS 111 Introductory General Physics I - 4 Credits **Or**
PHYS 125 Physics I - 4 Credits

C. Social Science emphasis electives
16 credits from among the following:

ANTH 110 Cultural Anthropology - 4 Credits

ECON 201 Principles of Microeconomics - 4 Credits

ECON 202 Principles of Macroeconomics - 3 Credits

ENGL 293 Writers Gone Wild: Literature and the Environment - 4 Credits

ENVS 320 Advanced GIS Applications - 4 Credits

HIST 308 Americans and Their Environments - 4 Credits

PHIL 281 Ethics - 4 Credits

POLS 313 State and Local Politics - 4 Credits

POLS 411 Bureaucracy - 4 Credits

PSYC 282 Social Psychology - 4 Credits

Requirements for the major – Environmental Science Track

A. Core requirements

ENVS 101 Environmental Studies I - Natural Science - 4 Credits

ENVS 205 Environmental Data Analysis - 4 Credits **Or**
POLS/SOCI 230 Introductory Data Analysis and Statistics - 4 Credits **Or**
PSYC 220 **Or**
BUSI 113

ENVS 206 Fieldcraft-Outdoor Proficiency - 4 Credits

ENVS 214 Environment, Politics and Society - 4 Credits

ENVS 220 Introduction to Geographic Information Systems - 4 Credits

ENVS 240 Environmental Research Procedures I - 3 Credits

ENVS 241 Environmental Research Procedures II - 3 Credits

ENVS 360 Junior Seminar - 1 Credit

ENVS 440 Environmental Research Planning - 2 Credits

ENVS 490 Senior Seminar - 2 Credits

ENVS 499 Senior Project in Environmental Studies - 2 to 4 Credits

MATH 151 Calculus I - 4 Credits

B. Breadth requirement
Four courses from the following:

BIOL 150 Biological Foundations - 4 Credits

CHEM 105 General Chemistry I - 3 Credits

CHEM 106 General Chemistry II - 3 Credits

GEOL 101 This Dynamic Earth - 4 Credits

MATH 152 Calculus II - 4 Credits

PHYS 111 Introductory General Physics I - 4 Credits **Or**
PHYS 125 Physics I - 4 Credits

PHYS 112 Introductory General Physics II - 4 Credits **Or**
PHYS 126 Physics II - 4 Credits

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

BIOL 322 Botany - 4 Credits

BIOL 354 Ecology - 4 Credits

CHEM 310 Basic Organic Chemistry - 3 Credits **Or**
CHEM 315 Organic Chemistry I - 3 Credits

CHEM 321 Introduction to Analytical Chemistry - 4 Credits

ENVS 300 Special Topics - 1 to 4 Credits

ENVS 315 Herpetology - 3 Credits

ENVS 320 Advanced GIS Applications - 4 Credits

ENVS 330 Ornithology - 4 Credits

ENVS 351 Environmental Biogeochemistry - 4 Credits

ENVS 357 Conservation Biology - 4 Credits

GEOL 201 Surficial Geology - 4 Credits

GEOL 464 Hydrogeology - 4 Credits

Upon completion of this program a student is able to:

1. Critically examine contemporary environmental issues.
2. Apply theoretical concepts to actual problems or issues
3. Construct well-structured natural and/or social science research projects
4. Work as a member of a team to solve an environmental problem or explain an environmental issue.

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, surficial geology, mineralogy and petrology; advanced studies; and field experience.

The Geology Program's mission is to provide students in all geoscience courses (major or non-major) with an appreciation and understanding of the earth's physical environment (geosphere, hydrosphere, atmosphere) and the interconnectedness between these systems. Because there are many aspects of the earth and its history that cannot be directly observed, part of our mission is to instill in our students an understanding of how the present models explaining the structure, composition, and history of the earth were derived.

Students in geology courses will gain basic knowledge and skills that will allow them to pursue professions in a variety of areas of geoscience, including teaching, graduate school, industry, government, and private consulting.

Requirements for the Geology major
Choose one introductory course from:

GEOL 101 This Dynamic Earth - 4 Credits

GEOL 103 Earthquakes and Volcanoes - 4 Credits

GEOL 104 Earth and Life through Time - 4 Credits

GEOL 106 Elementary Oceanography - 4 Credits

and take the following four courses:

GEOL 201 Surficial Geology - 4 Credits

GEOL 301 Structural Geology - 4 Credits

GEOL 302 Mineralogy and Petrology - 4 Credits

GEOL 464 Hydrogeology - 4 Credits **Or**
ENVS 351

Total Geology Core Credit Hours 20

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

ENVS 205 Environmental Data Analysis - 4 Credits

GEOL 206 Fieldcraft-Outdoor Proficiency - 4 Credits

ENVS 220 Introduction to Geographic Information Systems - 4 Credits

and 8 credits selected from the following:

ENVS 320 Advanced GIS Applications - 4 Credits

ENVS 351 Environmental Biogeochemistry (if not used above) - 4 Credits

GEOL 307 Stratigraphy and Sedimentation - 4 Credits

GEOL 408 Tectonics - 4 Credits

GEOL 414

GEOL 464 Hydrogeology (if not used above) - 4 Credits

Total Credit Hours for General Track Major 40

Planetary Science Track

ASTR 302 Planetary Science - 2 Credits

CHEM 105 General Chemistry I - 3 Credits

CHEM 106 General Chemistry II - 3 Credits

MATH 151 Calculus I - 4 Credits

MATH 152 Calculus II - 4 Credits

CEMS 235 Thermodynamics of Materials - 4 Credits

CEMS 251 Mechanics of Materials - 3 Credits **Or**
MECH 241 Mechanics of Materials - 3 Credits

CHEM 343 Physical Chemistry I - 4 Credits

CHEM 346 Physical Chemistry II - 3 Credits

GEOL 408 Tectonics - 4 Credits

GEOL 414

GEOL 464 Hydrogeology (if not used above) - 4 Credits

Total Credit Hours for Planetary Science Track Major 46

Earth Science Education Track

MATH 102 Mathematics for Teachers: Grades K-6 - 4 Credits

* GEOL 206 Fieldcraft-Outdoor Proficiency - 4 Credits

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

ASTR 103 Introductory Astronomy - 4 Credits

ASTR 107 Elementary Astronomy Lab - 2 Credits

ENVS 220 Introduction to Geographic Information Systems - 4 Credits

ENVS 320 Advanced GIS Applications - 4 Credits

ENVS 351 Environmental Biogeochemistry (if not used above) - 4 Credits

GEOL 307 Stratigraphy and Sedimentation - 4 Credits

GEOL 408 Tectonics - 4 Credits

GEOL 414

GEOL 464 Hydrogeology (if not used above) - 4 Credits

SCIE 110 Weather Elements - 2 Credits

Total Credit Hours for Earth Science Education Track Major 36

Upon completion of this program a student is able to:

1. Understand physical and theoretical models of how the earth works and the limitations of those models
2. Appreciate geologic time and the history of the earth
3. Understand how earth processes result in present landscapes
4. Understand dynamic equilibrium and feedback mechanisms in earth systems
5. Understand, use and evaluate quantitative data to solve problems or support hypotheses
6. Find and use primary literature
7. Use geologic materials and landscapes to reconstruct earth history

Minors

Requirements for the Environmental Studies minor

ENVS 101 Environmental Studies I - Natural Science - 4 Credits

ENVS 214 Environment, Politics and Society - 4 Credits

ENVS 240 Environmental Research Procedures I - 3 Credits

ENVS 241 Environmental Research Procedures II - 3 Credits

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

Total credit hours 22

Requirements for the minor in Geology

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 ENVS 320 or ENVS 351.

Total credit hours required 20

Requirements for the Minor in Planetary Science

The minor in Planetary Science is offered by the Division of Environmental Studies/ Geology and the Division of Physics/Astronomy. A student will have met the requirements for the minor after completing ASTR 302 and 12 credit hours of electives chosen from the courses below with a grade of C or better in each course. At least six credit hours must be 200-level or above.

ASTR 302 Planetary Science - 2 Credits

Select 12 credit hours from the following

ASTR 103 Introductory Astronomy - 4 Credits

ASTR 107 Elementary Astronomy Lab - 2 Credits

ASTR 307 Observational Astronomy - 2 Credits

GEOL 101 This Dynamic Earth - 4 Credits

GEOL 110

GEOL 201 Surficial Geology - 4 Credits

GEOL 210

GEOL 408 Tectonics - 4 Credits

Total Credit Hours 14

Equestrian Studies

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.

Minors

Equestrian Studies

The minor requires a total of 16 credit hours. 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.

Requirements for the Minor in Equestrian Studies
Theory Courses

EQUS 200 Special Topics - 1 to 4 Credits

EQUS 201 The Art and Theory of Equitation - 4 Credits

EQUS 205 Introduction to Equine Science - 4 Credits

EQUS 215 Equine Business Management - 4 Credits

EQUS 216 Horse Show Management - 4 Credits

EQUS 218 Judging Horse Shows - 4 Credits

EQUS 223 Hunter and Jumping Course Design - 2 Credits

EQUS 225 Equine Nutrition - 2 Credits

EQUS 226 Caring for the Equine Anatomy - 2 Credits

EQUS 228 The Equine Industry in Ireland - 2 Credits

Activity Courses

EQUS 100 Special Topics - 2 Credits

EQUS 101 English Riding: Level I - 2 Credits

EQUS 102 English Riding: Level II - 2 Credits

EQUS 103 English Riding: Level III - 2 Credits

EQUS 104 English Riding: Level IV - 2 Credits

EQUS 105

EQUS 110 Western Riding: Level I - 2 Credits

EQUS 111 Western Riding: Level II - 2 Credits

EQUS 112 Western Riding: Level III - 2 Credits

EQUS 113 Western Riding: Level IV - 2 Credits

EQUS 115

EQUS 118 Introduction to Reining - 2 Credits

EQUS 119

EQUS 120 Driving I - 2 Credits

EQUS 121 Driving II - 2 Credits

EQUS 122 Driving III - 2 Credits

Total Credit Hours 16

Equine Business Management

Students interested in the management of an equine business or working in the equine industry will benefit from this collaborative minor between the Equestrian Studies Program and the College of Business.

Equine Business Management Minor Requirements

ACCT 211 Financial Accounting - 3 Credits

BUSI 439 Entrepreneurship in the 21st Century - 3 Credits

EQUS 215 Equine Business Management - 4 Credits

MKTG 221 Marketing Principles and Management - 3 Credits

MKTG 482 Sales Management - 3 Credits

Plus a minimum of six (6) credit hours chosen from:

* EQUS 200 Special Topics - 1 to 4 Credits

EQUS 205 Introduction to Equine Science - 4 Credits

EQUS 216 Horse Show Management - 4 Credits

EQUS 218 Judging Horse Shows - 4 Credits

EQUS 223 Hunter and Jumping Course Design - 2 Credits

* (theory topics)

Total Credit Hours 22

Health and Human Performance Division

Majors

Athletic Training Program

The Athletic Training Program (ATP) is based on a Bachelor of Science degree in Athletic Training, plus fulfillment of all requirements for the Athletic Training Board of Certification (BOC) exam. Upon passing the BOC exam, the student will attain the qualification of a Certified Athletic Trainer.

Mission and Goals

The mission of the Athletic Training Program (ATP) at Alfred University is to provide the student with knowledge, standards, behavior models, code of ethics, and skills needed as an Athletic Trainer. The professional program is based on a solid foundation in allied health care arena, with a strong emphasis in the professional domains as outlined by the Board of Certification (BOC) Role Delineation Study.

Goals of the ATP Program are as follows:

1. Graduates of the Alfred University ATP will be able to demonstrate knowledge, skills, and abilities required of an entry-level athletic trainer through authentic, real-time opportunities as well as simulated practice.
2. Graduates of the Alfred University ATP will be able to demonstrate knowledge, skills, and abilities required of an entry-level athletic trainer as demonstrated by first time BOC pass rates, retention, graduation rates, and employment/placement rate.
3. Provide students enrolled in the Alfred University ATP with opportunities to learn from qualified faculty and allied health care providers in a variety of settings thereby exposing students to individuals across the lifespan with varying levels of activity.
4. Ensure graduates of the Alfred University ATP are quality employees or students in a higher education setting who have the ability to collaborate with allied health care professionals and who are able to implement evidence-based medicine in their respective setting.

Accreditation

Alfred University’s Athletic Training Program is accredited by the Commission on Accreditation of Athletic Training Education (CAATE).

Program Acceptance Process

Students who are admitted to the Athletic Training major through the admissions application to Alfred University as first year students must successfully complete first year program requirements for full acceptance into the Athletic Training program. During the first year students enroll in the Athletic Training Basic Program (ATBP), complete a Technical Standards for Admission form, OSHA and HIPAA training, and

a minimum of 50 clinical hours observing in the athletic training room under direct supervision of a certified staff athletic trainer. Upon successful completion of these program components, student can apply for full acceptance into the Athletic Training Program.

The directed observation period is comprised of two semesters. 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. Students are given an opportunity to observe athletic trainers working in these domains:

- Injury/Illness Prevention and Wellness Protection
- Clinical Evaluation and Diagnosis
- Immediate and Emergency Care
- Treatment and Rehabilitation
- Organization and Professional Health and Well-being

Near the end of the mandatory directed observation period, the prospective athletic training student may apply for acceptance into the Athletic Training Program (ATP). Application to the ATP level consists of submission of a résumé, immunization records, proof of a physical examination from a physician, intent to enroll, three letters of recommendation, transcripts, and evidence of successful completion of all requirements of the ATBP. Interviews with the program faculty are also required. In order to be considered for acceptance into the ATP the student must:

- have a cumulative grade-point average of 2.75 with a grade-point average of 3.00 or better in the courses included within the ATBP
- provide proof of current American Red Cross First Aid, CPR and AED For the Professional Rescuer certifications or certification as an Emergency Medical Technician
- provide proof of Hepatitis-B vaccination or declination statement
- provide proof of physical examination by a physician
- complete an Athletic Training Program Technical Standards for Admission form
- complete an Athletic Training Program Application
- submit three (3) letters of recommendation
- undergo a formal interview with AU ATP 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
- maintain student membership in the National Athletic Trainers' Association
- completion of required program forms as outlined on the ATP application checklist

Alfred University and the Division of Health and Human Performance are committed to the highest principles of academic and personal integrity concerning the application and admissions process of the Athletic Training Program. Therefore, an athletic training student may be given provisional acceptance or denied altogether based upon any of the following grounds:

- a cumulative grade-point average lower than 2.75
- a cumulative ATBP grade-point average lower than 3.0 or a grade below a "C" in any of the ATBP 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
- failure to complete required program application forms
- complete and successfully pass the entrance examination

Entrance Examination Policy

All students applying for acceptance into the Alfred University Athletic Training program will be required to take the entrance examination. The examination will evaluate students' knowledge of basic entry level skills taught in ATHT 103, 105, 110, & 111. Students will be required to pass the examination with minimum score of 75%. Students failing to meet the required 75% will be allowed one additional attempt. The scores will not be used as the only criterion for acceptance into the program, but will provide additional information to the selection committee.

Provisional Admission

Special circumstances may arise where a student may be accepted provisionally to the Alfred University Athletic Training Program, based on one of the conditions listed above. This category of acceptance is only utilized when students are extremely close to meeting a specific admission criterion. Athletic training students accepted on a provisional status will be notified in writing. In this instance, students will be given very clear objective criteria, which must be satisfied for full acceptance. The student-specific set of goals/criteria must be met during the succeeding semester in order to maintain their position in the Athletic Training 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-accepted status. This student must then re-apply to the program for re-acceptance.

Second-Chance Provision

A student not accepted into the Alfred University ATP 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 Athletic Training Program 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.

Appeals Process

Students not accepted into the ATP 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 Professional Studies) and ruled upon. 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.

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.

Student Transfer Policy

First-year 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 (ATBP prerequisites including 50 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 Program (ATP). These prerequisite courses must be taken at Alfred University; therefore, credit for these courses may not transfer from another institution. All transfer students will be evaluated on an individual basis for admittance to the ATBP.

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 ATP. The Alfred University Athletic Training Program currently does not allow juniors or seniors to transfer into the ATP.

Academic Requirements

Once a student is formally accepted into the ATP, 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 Athletic Training Program Probation.

- If placed on AT Program 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 suspension from the ATP, 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.

Curriculum Requirements for BS in Athletic Training

Students complete the Basic Program and the Athletic Training Program (below), the College of Professional Studies General Education Program, the University Physical Education and Global Perspective Requirements, and enough electives to reach at least 124 credit hours.

AT Basic Program Course Requirements (ATBP) **All courses for a major must be completed with grades of "C" or better.:
AT Basic Program Course Requirements (ATBP) **All courses for a major must be completed with grades of "C" or better.:

ATHT 103 Prevention and Care of Athletic Injuries - 4 Credits

ATHT 103L Lab - Prevention and Care of Athletic Injuries - 0 Credits

ATHT 104 Introduction to Clinical Experiences in AT - 1 Credit

ATHT 105 Perspectives in the Health Professions - 1 Credit

ATHT 110 Medical Sciences - 2 Credits

ATHT 111 Emergency Medicine in Athletic Training - 3 Credits

ATHT 111L - Lab - Emergency Medicine in Athletic Training - 0 Credits

ATHT 205 Structural Kinesiology - 3 Credits

ATHT 205L - Lab - Structural Kinesiology - 0 Credits

ATHT 210 Advanced Athletic Training - 3 Credits

Total credit hours 17

Athletic Training Continuing Program Requirements:
Athletic Training Continuing Program Requirements:

ATHT 190 Principles of Strength Training and Reconditioning - 2 Credits

ATHT 201 Clinical Experience in Athletic Training I - 1 Credit

ATHT 202 Clinical Experience in Athletic Training II - 1 Credit

ATHT 215 Personal Health and Wellness - 2 Credits

ATHT 222 Nutrition for Human Performance and Exercise - 2 Credits

ATHT 265 Integrative Therapeutic Applications I - 3 Credits

ATHT 275L - Lab - Integrative Therapeutic Applications I - 0 Credits

ATHT 276 Integrative Therapeutic Applications II - 3 Credits

ATHT 276L - Lab - Integrative Therapeutic Applications II - 0 Credits

ATHT 301 Clinical Experience in Athletic Training III - 1 Credit

ATHT 302 Clinical Experience in Athletic Training IV - 1 Credit

ATHT 310 Orthopedic Procedures - 2 Credits

ATHT 334 Physical Evaluation of the Lower Extremity - 3 Credits

ATHT 334L - Lab -Physical Evaluation of the Lower Extremity - 0 Credits

ATHT 348 Physical Evaluation of the Upper Extremity - 3 Credits

ATHT 348L - Lab - Physical Evaluation of Upper Extremity - 0 Credits

ATHT 392 Biomechanics - 2 Credits

ATHT 393 Physiology of Exercise - 4 Credits

ATHT 401 Clinical Experience in Athletic Training V - 1 Credit

ATHT 403 Medical Aspects of Athletic Training - 1 Credit

ATHT 420 Pharmacology in Athletic Training - 2 Credits

ATHT 432 Organization and Administration of Athletics - 2 Credits

ATHT 459 Research Design in Athletic Training - 2 Credits

ATHT 469 Research Methods in Athletic Training II - 1 Credit

ATHT 485 Clinical Internship in Athletic Training - 4 Credits

ATHT 490 Senior Seminar in Athletic Training - 1 Credit

ATHT 495 Current Topics in Athletic Training - 2 Credits

BIOL 207 Introduction to Anatomy and Physiology I - 4 Credits

BIOL 208 Introduction to Anatomy and Physiology II - 4 Credits

BIOL 150 Biological Foundations - 4 Credits

CHEM 105 General Chemistry I - 3 Credits

COMM 101 Introduction to Communication Studies - 4 Credits **Or**
COMM 210 Interpersonal Communication - 4 Credits **Or**
COMM 302 Public Relations Principles - 4 Credits **Or**
COMM 409 Organizational Communication - 4 Credits

PSYC 101 Introduction to Psychology - 4 Credits

PSYC 220 Psychological Methods and Statistics - 4 Credits **Or**
POLS 230 Introduction to Data Analysis and Statistics - 4 Credits **Or**
SOCI 230 Introduction to Data Analysis and Statistics - 4 Credits

PSYC 322 Health Psychology - 2 to 4 Credits

PSYC 330 Neuropsychology - 4 Credits

Total credit hours 78-80

Athletic Training Hours Requirements

Upon successful completion of the ATBP, the athletic training student must complete an additional minimum 900 verified clinical experience hours while occupying a place in the ATP. 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.

Preceptor Assignment

While enrolled in Clinical Experiences I-V the athletic training student will be assigned to a Clinical Preceptor. Each preceptor is responsible for a specific athletic team or clinical patient load. The athletic training student is responsible for attending all scheduled practices and home competitions and other assigned clinical times as mandated by the individual preceptor.

Each student will be given the opportunity to obtain hours within the parameters of upper extremity, lower extremity, general medical and equipment intensive environments that also encompass varying patient genders and ages.

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 preceptor 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 preceptor. If an absence is unexcused, the athletic training student will be subject to the disciplinary policy outlined in the Athletic Training Student Handbook. Students must also remain active when obtaining clinical hours. A minimum of 5 clinical hours per week are required for successful completion of the enrolled Clinical Experience course.

Athletic Training Student Evaluations

Athletic training students will be evaluated twofold each semester (mid-term and end-of-semester) by their respective preceptor. Self-evaluations will also be completed at this time. The preceptor 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 or assigned Clinical Preceptor at each site where clinical experience hours are obtained.

Likewise, athletic training students will be given the opportunity to evaluate both their preceptor 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 Program reviews all evaluations with each student and preceptor.

Senior Comprehensive Examination Policy

As part of an ongoing effort by the Alfred University Athletic Training Program (AU ATP) to ensure students are prepared to take the BOC, Inc. examination at the end of their senior year, the AU ATP has created a senior comprehensive examination. The examination is designed to evaluate the student's knowledge of entry level athletic training skill and knowledge. The examination will be used to assist the AU ATP in determining a candidate's readiness for certification. With current mandates set forth by the Commission on Accreditation of Athletic Training Education, the AU ATP will be required to document and demonstrate a 70% first time pass rate on the BOC, Inc. examination. As a result, only qualified and prepared students will be endorsed for this examination prior to graduation.

The senior comprehensive exam will consist of both a 200 question written test and a practical examination on all Athletic Training courses and clinical experiences taken within the AU ATP. Students will have two opportunities to pass the senior comprehensive exam. Failure to pass this exam on the second attempt will disqualify students from being endorsed by the Program Director to take the BOC, Inc. exam prior to graduation.

Students must receive scores of 75% or better on the written and practical exam separately before they can be endorsed by the Program Director and therefore, eligible to take the BOC, Inc. examination. The grades for the written and practical exam will be calculated into the student's grade for ATHT 490 Senior Seminar in Athletic Training.

Sophomore and Junior Review

At the end of the each semester of the sophomore and junior year, students will be evaluated through either clinical experience evaluations, academic review or comprehensive examination. Students not meeting the requirements set by the program will be placed on probation. The comprehensive examination will be offered at the end of the year will be a portion of the grade for either ATHT 202 or ATHT 302. Students must obtain a score of 75% or better in order to successfully pass the enrolled clinical experience course.

Additional Program Costs

There are costs associated with being enrolled in the ATP that are in addition to typical university costs such as tuition, room, board, and books. Typical fees associated with the ATP include but are not limited to: lab fees, personal liability insurance, immunization maintenance, apparel to adhere to dress code(s), student membership fees for the National Athletic Trainers Association during sophomore, junior and senior years in the program, and travel to and from off-campus clinical assignments and internships. A specific breakdown of additional program costs can be found on the Division's homepage.

Professional Organization Membership

Athletic training students are required 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 ATP students are encouraged to join the NATA and NYSATA. Membership applications are available from the Athletic Training Program Director.

Health Fitness Management

The Bachelor of Science (B.S.) in Health Fitness Management combines health studies with biology and science foundations and business concepts. The program includes a field experience and internship sequence, which provides the opportunity for guided clinical practice working with client populations in real world settings. The coursework and field experiences are designed so that graduates of the Health Fitness Management program will have fulfilled educational requirements for certifications from the National Strength and Conditioning Association (NSCA), the American College of Sports Medicine (ACSM), and the National Academy of Sports Medicine (NASM). Students graduating as health and fitness managers may pursue careers in corporate wellness, public and private fitness and wellness, or special population fitness and wellness. Students will also be prepared for a variety of health-related graduate studies, ranging from Physical Therapy to Exercise Science.

Mission and Goals

The mission of the Health Fitness Management major at Alfred University is to provide the student with knowledge, standards, behavior models, code of ethics, and skills needed as a fitness and wellness professional. Combining health and sciences studies with a basic business background, students will be prepared for careers in a variety of health or fitness settings.

Goals of the Program include:

1. Provide a quality, up-to-date educational curriculum.
2. Provide leadership and service to the university community through continuing education.
3. Promote self-directed learning and critical thinking as desirable professional behavior.
4. Exploration of a variety of health, fitness, and wellness settings to allow students the opportunity to determine specific career goals.

Curriculum Requirements

Students must complete the coursework requirements for the B.S. in Health Fitness Management, all College of Professional Studies General Education requirements,

and the Alfred University requirements for Physical Education and Global Perspective Requirements, plus enough electives to reach at least 120 credit hours.

Business Foundations Courses

ACCT 211 Financial Accounting - 3 Credits

MKTG 221 Marketing Principles and Management - 3 Credits

LAW 241 The Legal Environment of Business - 3 Credits

MGMT 328 Management and Organizational Behavior - 3 Credits

ECON 420 Healthcare Economics - 3 Credits

Total Credit Hours Business Foundation 15

Athletic Training Foundations Courses

ATHT 105 Perspectives in the Health Professions - 1 Credit

ATHT 110 Medical Sciences - 2 Credits

ATHT 111 Emergency Medicine in Athletic Training - 3 Credits

ATHT 190 Principles of Strength Training and Reconditioning - 2 Credits

ATHT 205 Structural Kinesiology - 3 Credits

ATHT 215 Personal Health and Wellness - 2 Credits

ATHT 222 Nutrition for Human Performance and Exercise - 2 Credits

ATHT 242 Sports, Society, and Ethics - 3 Credits

ATHT 392 Biomechanics - 2 Credits

ATHT 393 Physiology of Exercise - 4 Credits

ATHT 432 Organization and Administration of Athletics - 2 Credits

ATHT 459 Research Design in Athletic Training - 2 Credits

Total credit hours ATHT Foundation 28

Health and Fitness Management Courses

HFMT 305 Field Experience in Health Fitness Management - 1 Credit

HFMT 405 Program Design and Implementation in Health Fitness Management - 3 Credits

HFMT 420 Special Populations and Health Appraisal - 2 Credits

HFMT 410 Exercise Prescription - 4 Credits

HFMT 485 Internship - 3 Credits

HFMT 490 Senior Seminar - 1 Credit

HFMT 495 Health Promotion Program Design - 2 Credits

Total Credit Hours HFMT Courses 15

General Education Courses

BIOL 150 Biological Foundations - 4 Credits

BUSI 113 Descriptive Analytics & Statistics - 3 Credits

COMM 101 Introduction to Communication Studies - 4 Credits

ENGL 101 Writing I - 4 Credits

ENGL 102 Writing II - 4 Credits

Humanities - 4 Credits

Total Credit Hours General Education 23

Liberal Arts Core

BIOL 119 Physiology of Aging - 4 Credits

BIOL 207 Introduction to Anatomy and Physiology I - 4 Credits

BIOL 208 Introduction to Anatomy and Physiology II - 4 Credits

PSYC 101 Introduction to Psychology - 4 Credits

PSYC 251 Principles of Learning and Behavior Modification - 4 Credits

PSYC 322 Health Psychology - 2 to 4 Credits

Additional Liberal Arts Electives (minimum) - 2 Credits

Total Credit Hours Liberal Arts Core 26

Clinical Experiences

Health and fitness management students learn about practice settings and strong skills in working with clients in applied settings through a sequence of clinical experiences. Evaluation of student competencies in applied settings assures that students have integrated key skills and are ready for clinical practice. Students will be evaluated at clinical experience sites during HFMT 305: Field Experience and HFMT 485: Health Fitness Management Internship by their site supervisors. This evaluation will consist of quantitative and qualitative measures identifying a student’s abilities, knowledge, and professional skills in each clinical setting. The scores of these evaluations will contribute to the grades for their respective classes, and will become part of their professional portfolio.

Additional Program Costs

There are costs associated with being enrolled in the HFMT Program that are in addition to typical university costs such as tuition, room, board, and books. Typical fees associated with HFM may include but are not limited to: lab fees, personal liability insurance, immunization maintenance, apparel to adhere to dress code(s), student

membership fees for the professional organizations (NSCA, ACSM, NASM, etc.), and travel to and from off-campus clinical assignments and internships.

Minors

Students from any curriculum area at Alfred University are permitted to enroll in the minors. These minors allow students to combine interests in a variety of study areas, while maintaining a focus on fitness and wellness.

Coaching Minor

If you're looking to become licensed as a coach for youth or adult community athletics clubs, or if your passion for coaching is at the educational level, the Alfred University Athletic Coaching minor is for you. The Coaching program takes an interdisciplinary approach, addressing topics ranging from CPR and other first aid, nutrition, and personal health, to coaching theory and sports philosophy.

Required Courses:

COAC 291 Philosophy, Principles and Organization of Athletics in Education - 3 Credits

COAC 301 Health Sciences Applied to Coaching - 3 Credits

COAC 475 Theories and Techniques of Coaching Sports - 2 Credits

ATHT 111 Emergency Medicine in Athletic Training - 3 Credits

ATHT 190 Principles of Strength Training and Reconditioning - 2 Credits

ATHT 222 Nutrition for Human Performance and Exercise - 2 Credits

Electives* (Take at least 5 credits):

ATHT 103 Prevention and Care of Athletic Injuries - 4 Credits

ATHT 215 Personal Health and Wellness - 2 Credits

ATHT 232 Introduction to Sports Management - 3 Credits

Total Credit Hours (minimum) 19

*As approved by advisor related special topics courses may be counted as electives.

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 Credits

ATHT 103L - Lab - Prevention and Care of Athletic Injuries - 0 Credits

ATHT 111 Emergency Medicine in Athletic Training - 3 Credits

ATHT 111L - Lab - Emergency Medicine in Athletic Training - 0 Credits

ATHT 190 Principles of Strength Training and Reconditioning - 2 Credits

ATHT 205 Structural Kinesiology - 3 Credits

ATHT 205L - Lab - Structural Kinesiology - 0 Credits

ATHT 215 Personal Health and Wellness - 2 Credits

ATHT 222 Nutrition for Human Performance and Exercise - 2 Credits

ATHT 393 Physiology of Exercise - 4 Credits

BIOL 207 Introduction to Anatomy and Physiology I - 4 Credits

BIOL 208 Introduction to Anatomy and Physiology II - 4 Credits

Total Credit Hours 27

Sports Management Minor

The Sports Management Minor draws from various academic areas to provide students with an exposure to the business of sport. Students combine foundation skills in business administration with knowledge and skills required to manage sports operations. An internship in a sports facility provides a culminating professional experience for the minor.

Required Courses:

ATHT 232 Introduction to Sports Management - 3 Credits

ATHT 242 Sports, Society, and Ethics - 3 Credits

ATHT 432 Organization and Administration of Athletics - 2 Credits

BUSI 485 Internship - 1 to 4 Credits

COMM 302 Public Relations Principles - 4 Credits

LAW 241 The Legal Environment of Business - 3 Credits

MGMT 328 Management and Organizational Behavior - 3 Credits

MKTG 221 Marketing Principles and Management - 3 Credits

Total Credit Hours 23-25

Human Studies Division

Majors

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 understands what it is and what it wants to be based on an understanding of what it has been. Our history shapes our identity.

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, and reform and revolution. It approaches the past by analyzing political, cultural, social, intellectual and military developments.

The program addresses 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. Recent graduates have gone into law, business, teaching, government service, professional sports, and advertising. We open doors for our history majors.

Requirements for the major

From the numerous courses offered, 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

Upon completion of this program a student is able to:

1. Answer questions accurately and succinctly and with specific reference to reading and lecture material received
2. Think and write critically about historical issues, including historiography
3. Use primary and secondary sources in developing historical analyses

Philosophy

The philosophy program gives students the opportunity to think deeply and systematically about fundamental issues having to do with knowledge, values, human nature, and culture. Some of these relate to foundational questions in various disciplines—for instance: Does the scientific view of the world mean that free will is an illusion? Could a computer be conscious? What makes a work of art meaningful? What is justice? Other questions arise in the course of everyday experience and concern the way we live—our ethics, our choices, our relationships, and our work.

Philosophy students will become acquainted with the history of ideas, with classical and contemporary philosophical debates, and with methods of philosophical analysis. A student who graduates with a major in philosophy will be knowledgeable about the history of Western thought, have some acquaintance with non-Western thinking, be skilled in the analysis of arguments and texts, and be able to understand contemporary issues in their broader historical, intellectual, and cultural contexts. Since philosophical questions often overlap with questions in other fields of learning, philosophy students are encouraged to take interdisciplinary work.

Philosophy majors can pursue careers in any field requiring well-developed analytical and communication skills, including government, business and service professions. Philosophy is also excellent preparation for further studies in graduate and professional schools. Our recent graduates are pursuing careers in medicine, law, philosophy, teaching, politics and policy, and performance art.

Requirements for the major

Students choose one of two tracks:

General Philosophy Track
Required Courses: 12 credits

PHIL 282 Introduction to Logic - 4 Credits

Choose 8 credits from the following courses:

PHIL 311 Greek Philosophy - 4 Credits

PHIL 312 Philosophical Foundations of Modernity - 4 Credits

or topics courses with substantial history of philosophy content chosen with major advisor.

Elective Courses: 20 credits
(12 credits must be above 300-level)

PHIL Philosophy Electives

Total credit hours 32

Philosophy of Religions Track
Required Courses: 12 credits

PHIL 281 Ethics - 4 Credits

Choose 8 credits from the following courses:

PHIL 311 Greek Philosophy - 4 Credits

PHIL 312 Philosophical Foundations of Modernity - 4 Credits

or topics courses with substantial history of philosophy content chosen with major advisor.

Elective Courses: 24 credits

PHIL Philosophy Electives (4 credits must be 300-400 level) - 8 Credits

RLGS Religious Studies Electives (8 credits must be 300-400 level) - 16 Credits

Total credit hours 36

Upon completion of this program a student is able to:

1. Discuss links between philosophy and other cultural phenomena, e.g. natural science, the arts, politics, religion, etc.
2. Express ideas clearly, both orally and in writing
3. Demonstrate competence in beginning formal logic to the level of first-order quantification (General track)
4. Read texts carefully, sensitively and critically
5. Demonstrate facility with the methodologies of interpretation in studying religions
6. Evaluate the nature and quality of arguments
7. Demonstrate knowledge of at least two periods or movements in the history of philosophy
8. Demonstrate familiarity with several ongoing debates in contemporary philosophy
9. Make meaningful comparisons between religious traditions (Philosophy of Religions track)
10. Demonstrate knowledge of world religions and wisdom-centered traditions (Philosophy of Religions track)

Minors

History

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

Philosophy

The philosophy minor consists of 20 credits in philosophy. A minimum of 12 credit hours must be at the 300 level or above. With permission of the minor advisor, a student may substitute up to 4 credits of the 20 from a related discipline.

Religious Studies

The Religious Studies minor helps students to gain new intellectual perspectives on their own religions and those of other people. It encourages students to see what the world's great religions have in common and how they differ. Courses explore both Asian traditions (Hinduism, Buddhism, Jainism, Sikhism, Confucianism, Taoism, and Shinto) and Western monotheistic traditions (Judaism, Christianity, Islam).

We explore the many ways that human beings have asked and answered some of the big questions such as: What is the nature of ultimate reality? Why do we experience suffering and death? How should we live in this life? What is our ultimate purpose?

The study of religions is inherently interdisciplinary. We consider the great religious stories of each tradition as well as important teachings, texts, teachers, ethics, rituals, and other practices. We examine related material objects including art, architecture, music, food, clothing, and body modification. We explore the emotional dimensions of religious experience, the social functions of religion, historical developments, and debates within each tradition and between traditions.

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

Mathematics

The mathematics and computer science program gives students a sound education in modern mathematics and computer science. The majors are flexible, allowing for emphasis on pure or applied mathematics, computer science, physical science, actuarial science, data science, business administration, or even a second major. A student who earn a degree in mathematics or computer science is well-prepared for either immediate employment after graduation, or further study in graduate school.

The mathematics and computer science program serves a variety of purposes:

- Maintaining a dynamic and flexible program for mathematics, computer science, and actuarial science majors
- Providing the mathematical foundation for engineering and science students
- Providing the computer science foundation for data science, data analytics, and business analytics students
- Offering an introduction to quantitative reasoning for liberal arts, education, and business students
- Emphasizing applications to real-world problems from a variety of disciplines
- Enhancing degrees in other disciplines through minors in mathematics, computer science, and data science

Prepare for an exciting career

The study of mathematics and computer science can lead to an exciting career in a variety of professional areas, including scientific research, engineering, finance, software development, actuarial science, data science, industry, business, education, and government service. Because of the wide range of uses for mathematics and computer science, and the need for those who are skilled in these disciplines, employment prospects are excellent.

Help solve important problems

Mathematicians and computer scientists help create, understand, and analyze mathematical and computer models that deal with some of the most important problems of our time, such as climate change, medical research, human behavior, internet security, and new energy resources.

Discover the worlds within and around us

When viewed as abstract disciplines, mathematics and computer science are appreciated for their intrinsic beauty; they help develop fundamental theories that provide order, certainty, and truth on both logical and intellectual levels. As applied sciences, mathematics and computer science are appreciated for their ability to describe pattern, symmetry, and change, and for their power to predict, infer, simulate, and optimize real events and natural phenomena.

Majors

Bachelor of Arts in Mathematics

The Bachelor of Arts (BA) degree allows for an abundance of free general electives through which students can explore a variety of other interests and experience the

diversity of a liberal arts education. It is a great option when pursuing one or more minors or a double major, and it opens up a world of exceptional career opportunities.

Requirements for the Bachelor of Arts major in Mathematics

MATH 151 Calculus I - 4 Credits

MATH 152 Calculus II - 4 Credits

MATH 253 Calculus III - 4 Credits

MATH 271 Differential Equations - 3 Credits

MATH 281 Foundations of Higher Mathematics - 4 Credits

MATH 371 Linear Algebra - 4 Credits

MATH 481 Modern Algebra - 4 Credits

MATH 491 Advanced Calculus - 4 Credits

- Plus 6 credit hours in math courses numbered above 240

All major courses must be passed with a grade of C or better.

Total credit hours 37

Upon completion of this program a student is able to:

- Understand and apply problem-solving techniques
- Read, write, and analyze mathematical proofs
- Communicate mathematics both orally and in writing
- Understand concepts and applications from a broad range of mathematical areas

Students who are pursuing the Bachelor of Arts degree in mathematics and have a particular interest in science, education, or business typically choose one of the following options:

Science Option

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

MATH 381 Mathematical Statistics - 4 Credits

MATH 401 Advanced Engineering Mathematics - 4 Credits

Education Option

The Education Option is for students who plan on pursuing a middle school or high school teaching career. In addition to completing the required minor program in education, students are advised to take the following elective mathematics courses:

MATH 381 Mathematical Statistics - 4 Credits

MATH 461 Geometry - 4 Credits

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 Credits

MATH 381 Mathematical Statistics - 4 Credits

4+1 Masters in Business Administration (MBA)

Alfred University's 4+1 MBA program meets the demands of a marketplace that requires students to graduate with a comprehensive list of skills needed to thrive in today's dynamic economy. The structure of the 4+1 MBA program best ensures that students will earn their Bachelor of Arts degree in mathematics in four years and complete the Master of Business Administration degree requirements in one. By earning an MBA in combination with an undergraduate degree, students will demonstrate greater strength and flexibility as they enter the job market. In order to complete the MBA in one year after earning the Bachelor of Arts degree, the following foundational business courses should be completed while pursuing the BA in mathematics:

BUSI 113 Descriptive Analytics & Statistics - 3 Credits

ACCT 211 Financial Accounting - 3 Credits

MKTG 221 Marketing Principles and Management - 3 Credits

MGMT 328 Management and Organizational Behavior - 3 Credits

FIN 348 Managerial Finance - 3 Credits

MGMT 484 Operations Management - 3 Credits

Bachelor of Science in Mathematics

The Bachelor of Science (BS) degree in mathematics offers a rigorous and broad range of courses in mathematical theory and mathematical and scientific applications. Like the Bachelor of Arts degree, students earning a Bachelor of Science degree in mathematics develop a firm mathematical foundation and experience the diversity of a liberal arts education, but they will also have the opportunity to study specific aspects of mathematics and science in greater depth. The additional coursework gives students a head start toward earning a minor in one of the natural sciences or computer science. Students who successfully complete the Bachelor of Science degree are much stronger applicants for graduate programs and jobs requiring analytical problem solving, such as those in finance and computer science.

Requirements for the Bachelor of Science major in Mathematics

CSCI 156 Computer Science I - 4 Credits

MATH 151 Calculus I - 4 Credits

MATH 152 Calculus II - 4 Credits

MATH 253 Calculus III - 4 Credits

MATH 271 Differential Equations - 3 Credits

MATH 281 Foundations of Higher Mathematics - 4 Credits

MATH 371 Linear Algebra - 4 Credits

MATH 381 Mathematical Statistics - 4 Credits

MATH 481 Modern Algebra - 4 Credits

MATH 491 Advanced Calculus - 4 Credits

- Plus 11 credit hours in mathematics courses numbered above 300 and 8 credit hours of natural and computer science courses different from those used to satisfy degree, major, and general education requirements.

All major courses must be passed with a grade of C or better.

Total credit hours 58

Upon completion of this program a student is able to:

- Understand and apply problem-solving techniques
- Read, write, and analyze mathematical proofs
- Communicate mathematics both orally and in writing
- Understand concepts and applications from a broad range of mathematical areas
- Understand connections between mathematics and a broad range of scientific areas
- Understand elementary computer science and its applications
- Understand at least one mathematical or scientific area in greater depth

Mathematics with Actuarial Science

Actuaries help companies manage risk by analyzing information using mathematical tools. In terms of income, work environment, and hiring outlook, actuary consistently ranks as one of the top jobs in the United States. In order to be admitted to an actuarial society, candidates must pass a sequence of preliminary and advanced exams and are required to satisfy three VEE (Validation by Educational Experience) requirements in economics, corporate finance, and applied statistical methods. The Bachelor of Science (BS) degree in mathematics with actuarial science prepares students to enter the actuarial field while giving them a broad introduction to the study of mathematics.

Requirements for the Bachelor of Science major in Mathematics with Actuarial Science:

ACCT 211 Financial Accounting - 3 Credits

ACCT 212 Managerial Accounting - 3 Credits

CSCI 156 Computer Science I - 4 Credits

ECON 201 Principles of Microeconomics - 4 Credits

ECON 202 Principles of Macroeconomics - 3 Credits

FIN 205 Student Managed Investment Fund - 1 Credit

FIN 206 Student Managed Investment Fund Laboratory - 1 Credit

FIN 348 Managerial Finance - 3 Credits

MATH 151 Calculus I - 4 Credits

MATH 152 Calculus II - 4 Credits

MATH 253 Calculus III - 4 Credits

MATH 271 Differential Equations - 3 Credits

MATH 281 Foundations of Higher Mathematics - 4 Credits

MATH 351 Introduction to Operations Research - 4 Credits

MATH 371 Linear Algebra - 4 Credits

MATH 381 Mathematical Statistics - 4 Credits

MATH 382 Actuarial Exam Preparation - 1 Credit

MATH 391 Statistical Methods - 3 Credits

MATH 481 Modern Algebra - 4 Credits

MATH 491 Advanced Calculus - 4 Credits

All major courses must be passed with a grade of C or better.

Total credit hours 65

Upon completion of this program a student is able to:

- Demonstrate preparation to enter the actuarial field
- Demonstrate preparation for graduate study in mathematics or statistics
- Demonstrate preparation for the first two actuarial exams
- Demonstrate satisfaction of the VEE requirements

Minors

Mathematics Minor

A mathematics minor allows students the opportunity to broaden their educational experience and enrich career possibilities. It pairs well with any discipline in which analytical, computational, or quantitative skills are important.

Requirements for the minor in Mathematics:

MATH 151 Calculus I - 4 Credits

MATH 152 Calculus II - 4 Credits

MATH 253 Calculus III - 4 Credits

- Plus 10 credit hours of mathematics courses numbered 200 and above, selected in consultation with the mathematics minor advisor.

At most two credits of independent study (MATH 250 or MATH 450) may be applied toward the minor.

All minor courses must be passed with a grade of C or better.

At least half of the required minor credits must be completed at Alfred University.

Total credit hours 22

Data Science Minor

Innovations in technology have led to a substantial growth in available data that must be aggregated, manipulated, integrated, and analyzed. The minor in Data Science gives students an overview of big data and the techniques for handling it. This minor is an asset to any discipline involving data-driven analysis and inference.

Requirements for the minor in Data Science:

CSCI 156 Computer Science I - 4 Credits

CSCI 205 Database Systems - 4 Credits

MATH 151 Calculus I - 4 Credits

MATH 231 Introduction to Data Science - 4 Credits

- Plus 6-8 credit hours of electives, selected in consultation with the data science minor advisor.

Electives for the minor in Data Science:

BIOL 226 Biostatistics - 4 Credits

BIOL 405 Bioinformatics - 4 Credits

BUSI 113 Descriptive Analytics & Statistics - 3 Credits

ENGR 305 Engineering Statistics - 3 Credits

ENVS 205 Environmental Data Analysis - 4 Credits

ENVS 220 Introduction to Geographic Information Systems - 4 Credits

MATH 351 Introduction to Operations Research - 4 Credits

MATH 371 Linear Algebra - 4 Credits

MATH 381 Mathematical Statistics - 4 Credits

MKTG 452 Market Research - 3 Credits

POLS/SOCI 230 Intro to Data Analysis and Statistics - 4 Credits

- Other elective courses may be approved with Division permission.

At most one statistics course may be applied toward the minor.

All minor courses must be passed with a grade of C or better.

At least half of the required minor credits must be completed at Alfred University.

Total credit hours 22-24

Modern Languages Division

Languages taught: Chinese, French, German, Latin, Spanish

The Modern Languages Division offers majors in Foreign Language and Culture Studies (concentration in French) and in Spanish as well as minors in French and Spanish. Both beginning and intermediate language instruction are available in Chinese. Beginning language instruction and more advanced independent studies are available in German and Latin.

Majors

Foreign Language and Culture Studies with a Concentration in French

Foreign Language and Culture Studies with a concentration in French is an interdisciplinary major that requires 20 credits of upper-level French courses, a minimum of 8 credits in a second foreign language, and selection of courses in related fields such as French and Francophone history, art history, global studies or linguistics.

Requirements for the major

Students must take at least 20 credits taught in French. At least 20 credits for the major must be taken on the Alfred University campus.

Core courses

FREN 302 Advanced French Grammar and Composition I - 4 Credits

FREN 490 Modern Languages Senior Seminar - 0 Credits

Major level French courses

FREN 202 or above or prior-approval by advisor - 16 Credits

Second Foreign Language

Minimum of 8 credits

Elective courses in related fields - 12 Credits

Total Credit Hours 40

Note: All courses taken abroad or in affiliated fields (e.g. history, art history, or linguistics) must be pre-approved by the major advisor. Additional courses in French or another foreign language may count as electives. Only 4 credits at the 100-level allowed.

Students majoring in Foreign Language and Culture Studies are encouraged to pursue some independent study and to spend at least a semester in a French language Study Abroad program.

Spanish

The Modern Languages Program offers a Spanish major giving students a proficiency in speaking, listening, reading, and writing. Alfred students who complete a Spanish major develop their basic knowledge in three areas: Hispanic language, culture, and literature, when they complete the six core courses. 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 Credits

SPAN 311 Peninsular Culture and Literature I: Medieval - Eighteenth Century - 4 Credits

SPAN 312 Peninsular Culture and Literature II: 19th - 20th Century - 4 Credits

SPAN 315 Latin American Culture and Literature I - 4 Credits

SPAN 316 Latin American Culture and Literature II - 4 Credits

SPAN 360 Literary Theory Seminar - 4 Credits

SPAN 490 Modern Languages Senior Seminar - 0 Credits

Elective Courses (choose 12 credit hours)

SPAN 217 Exiled from Justice: Equatorial Guinean Writers in Africa and Spain - 4 Credits

SPAN 220 Literatura Infantil y Juvenil - 4 Credits

SPAN 300 Migraciones Hispanoamericanas - 4 Credits

SPAN 400 Topics in Hispanic Literature - 1 to 4 Credits

SPAN 402 Readings in Modern Latin American Literature - 4 Credits

SPAN 404 Latinos/as in the United States - 4 Credits

SPAN 450 Independent Study - 1 to 4 Credits

Total credit hours 36

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

Upon completion of the Foreign Language and Culture Studies or Spanish programs a student is able to:

1. Demonstrate knowledge and understanding of target cultures
2. Demonstrate ability to critically analyze the style, context and content of selected text
3. Demonstrate ability to find significant and appropriate scholarly resources, to cite and evaluate sources, and to describe the significance of research content
4. Demonstrate ability to write comprehensibly with grammatical accuracy, a range of vocabulary and content. Show little evidence of English interference in target language
5. Demonstrate aural comprehension and an ability to speak comprehensibly with overall grammatical accuracy, clarity, a range of vocabulary and content, and accurate pronunciation. Show little evidence of English interference in target language

Minor

Requirements for the minor in French

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

Students wishing to minor in French take one required course:

FREN 302 Advanced French Grammar and Composition I - 4 Credits

They then select a minimum of 16 credit hours above FREN 201 (FREN 202 counts for the minor)

Total credit hours 20

Requirements for the minor in Spanish

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

SPAN 301 Advanced Conversation and Composition - 4 Credits

SPAN 311 Peninsular Culture and Literature I: Medieval - Eighteenth Century - 4 Credits **Or**
SPAN 312 Peninsular Culture and Literature II: 19th - 20th Century - 4 Credits

SPAN 315 Latin American Culture and Literature I - 4 Credits **Or**
SPAN 316 Latin American Culture and Literature II - 4 Credits

SPAN 360 Literary Theory Seminar - 4 Credits

Choose 4 credit hours from

SPAN 202 Intermediate Spanish IV - 4 Credits

SPAN 400 Topics in Hispanic Literature - 1 to 4 Credits

SPAN 450 Independent Study - 1 to 4 Credits

Total credit hours 20

Physics and Astronomy

Majors

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.

The requirements for the physics major include a core of introductory, intermediate, and advanced courses in physics and the completion of one of five concentrations outlined

below. Several related courses in mathematics are also required in preparation for the various core courses.

Core Requirements	**32 Credits**
Concentration	**8 Credits**
Total Requirements	**40 Credits**

Core Requirements for the major
Introductory and Intermediate Courses:

PHYS 125 Physics I - 4 Credits

PHYS 126 Physics II - 4 Credits

PHYS 325 Elementary Optics - 3 Credits

PHYS 326 Elementary Modern Physics - 3 Credits

PHYS 341 Advanced Physics Laboratory - 2 Credits

Upper Level Courses:

PHYS 401 Quantum Mechanics I

PHYS 421 Statistical Mechanics - 4 Credits

PHYS 423 Classical Mechanics - 4 Credits

PHYS 424 Electricity and Magnetism I - 4 Credits

Completing a Concentration

To ensure a maximum flexibility in meeting student goals, five concentrations have been devised, well-suited to the mix of experiences available at Alfred University. These concentrations leverage the interconnections between physics, astronomy, and several of our engineering programs.

Each concentration requires 8 credits of electives from the options listed below. The concentrations are as follows:

General Physics

This concentration allows maxim breadth in students' physics preparation.

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

Theoretical Physics
This concentration allows maximum depth in students' physics preparation.

PHYS 402 Quantum Mechanics II - 4 Credits

PHYS 405 General Relativity - 4 Credits

PHYS 410 Particle Physics - 4 Credits

PHYS 454 Electricity and Magnetism II - 4 Credits

Astrophysics

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

ASTR 302 Planetary Science - 2 Credits

ASTR 303 Stellar Astronomy - 3 Credits

ASTR 304 Galactic Astronomy and Cosmology - 4 Credits

ASTR 307 Observational Astronomy - 2 Credits

Solid State Physics
This concentration takes 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, Ceramic Engineering, or Glass Science) will find this option most attractive.

CEMS 344 Properties II: Electrical, Magnetic, and Optical - 4 Credits

CEMS 347 Spectroscopy - 2 Credits

CEMS 349 X-ray Characterization - 2 Credits

* CEMS 501 Solid State Physics - 3 Credits

PHYS 408 Physics of Glass - 4 Credits

*seniors in good standing may, with permission of instructor, take a 500-level graduate course.

Mechanical Systems
This concentration includes the offerings in fluid mechanics, thermodynamics, and vibrating systems of AU's Mechanical Engineering program. It is particularly appropriate for students seeking both a BA in physics and a BS in Mechanical Engineering.

MECH 321 Thermodynamics II - 3 Credits

MECH 324 Fluid Mechanics I - 3 Credits

MECH 415 Mechanical Vibrations I - 3 Credits

MECH 424 Fluid Mechanics II - 3 Credits

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.

Related Courses

The following courses in mathematics fulfill the prerequisites of various physics courses required for the major. These courses should ideally be completed by the end of the second year.

- MATH 151 Calculus I - 4 Credits
- MATH 152 Calculus II - 4 Credits
- MATH 253 Calculus III - 4 Credits
- MATH 271 Differential Equations - 3 Credits

Upon completion of this program a student is able to:

1. Demonstrate understanding of the conservation rules that govern the universe and how those rules are applied to the various disciplines within physics.

2. Use mathematical reasoning to apply the laws of physics to a range of physical situations and identify the assumptions made in obtaining a solution.
3. Ask a testable question and suggest realistic experiments to determine the answer to that question.
4. Demonstrate familiarity with the physics literature.

Life and Physical Sciences major

The Life and Physical Sciences major is offered jointly by the Divisions of Biology, Chemistry and Physics/Astronomy. See Life and Physical Sciences major under the Division of Biology for the summary of major requirements

Minors

Physics Minor

- PHYS 125 Physics I - 4 Credits
- PHYS 126 Physics II - 4 Credits
- PHYS 325 Elementary Optics - 3 Credits
- PHYS 326 Elementary Modern Physics - 3 Credits
- Physics Electives (300 level or above) - 8 credits

Total Credit Hours 22

Notes:

- Up to 4 credits of physics electives may be taken in astronomy courses (300 level or above)
- Many 300 and 400 level physics courses are only offered in alternate years, so careful scheduling is necessary. PHYS 125, 126, 325, and 326 should be completed by the end of the fall of the junior year.

Astronomy Minor

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 Astronomy courses in the Astrophysics Concentration.

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 16 (two of them), 20 and 32 inch apertures (one 16 inch and the 32 inch instruments are 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.

ASTR 107 Elementary Astronomy Lab - 2 Credits

* ASTR 302 Planetary Science - 2 Credits

* ASTR 303 Stellar Astronomy - 3 Credits

* ASTR 304 Galactic Astronomy and Cosmology - 4 Credits

ASTR 307 Observational Astronomy - 2 Credits

Total credit hours 13

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

Planetary Science Minor

The minor in Planetary Science is offered by the Division of Environmental Studies/ Geology and the Division of Physics/Astronomy. A student will have met the requirements for the minor after completing ASTR 302 and 12 credit hours of electives chosen from the courses below with a grade of C or better in each course. At least six credit hours must be 200-level or above.

* ASTR 302 Planetary Science - 2 Credits

Select 12 credit hours from the following

ASTR 103 Introductory Astronomy - 4 Credits

ASTR 107 Elementary Astronomy Lab - 2 Credits

* ASTR 307

GEOL 101 This Dynamic Earth - 4 Credits

GEOL 110

GEOL 201 Surficial Geology - 4 Credits

GEOL 408 Tectonics - 4 Credits

Total Credit Hours 14

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

Psychology

Majors

Psychology

The Psychology Program exposes students to the current theories and research in the field, emphasizing the importance of the scientific approach to the study of human behavior and mental states. The curriculum fosters communication skills and critical, scientific thinking about psychological issues. Students in the Psychology program have the opportunity to gain applied experience through supervised counseling skills training, directed research, independent study, and internships. Students in the program will be prepared for graduate education or entry into occupations which utilize knowledge of human behavior, such as counseling, education, law, medicine, and business.

Students who decide to major in Psychology will have comprehensive exposure to the discipline as well as the concentration to gain additional knowledge and skills related to specific areas of psychology. There are five program options for Psychology majors:

The General Psychology Concentration encourages breadth of study and allows flexibility in course selection that provides a general knowledge of human behavior and psychological functioning that is useful in many types of careers.

The Clinical/Counseling Psychology Concentration 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 in any of the clinical or counseling fields.

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

The Child Psychology Concentration 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.

The Industrial/Organizational Concentration is for students interested in careers where psychology and business intersect. Such fields include advertising, marketing, human resource management, and human factors engineering. The program prepares students for graduate study or careers in business and industry.

Requirements for the major
Foundational Core (all Concentrations) (14 credit hours)

PSYC 101 Introduction to Psychology - 4 Credits

PSYC 220 Psychological Methods and Statistics - 4 Credits

PSYC 230 Psychological Research and Design I - 2 Credits

PSYC 310 Professional Preparation in Psychology - 2 Credits

PSYC 497 Senior Seminar - 2 Credits

Upon completion of this program a student is able to:

1. Demonstrate understanding of the theories and research findings in the core sub-disciplines of the field, including Neurological, Developmental, Social, Clinical/ Abnormal, Cognitive/Experimental, and Personality Psychology
2. Demonstrate the ability to discriminate between Scientific (Empirical) and non-Scientific evidence or sources of information
3. Demonstrate an understanding of the Experimental Method and how it's interpretation differs from Non-Experimental methods
4. Form an opinion on a psychological issue and defend that position with relevant empirical evidence
5. Demonstrate a basic competence in generating a research hypothesis and a research design based upon a critical review of relevant literature
6. Demonstrate the ability to communicate about psychological issues through oral presentations and discussions
7. Demonstrate the ability to communicate about psychological issues through written papers or poster presentations

8. Demonstrate the ability to conduct a thorough literature search on psychological issues or topics

General Psychology Concentration

Foundational Core (14 credit hours)

A. Biological (4 credit hours)
A. Biological (4 credit hours)

PSYC 330 Neuropsychology - 4 Credits

B. Learning and Cognitive Processes (4 credit hours)
B. Learning and Cognitive Processes (4 credit hours)

PSYC 251 Principles of Learning and Behavior Modification - 4 Credits

PSYC 311 Sensation and Perception - 4 Credits

PSYC 332 Cognitive Processes - 4 Credits

C. Developmental (4 credit hours)
C. Developmental (4 credit hours)

PSYC 118 Introduction to Adult Development and Aging - 4 Credits

PSYC 261 Cognitive Development - 4 Credits

PSYC 262 Social Development - 4 Credits

D. Social and Personality (4 credit hours)
D. Social and Personality (4 credit hours)

PSYC 282 Social Psychology - 4 Credits

PSYC 341 Theories of Personality - 4 Credits

PSYC 372 Psychology of Gender - 4 Credits

E. Mental and Physical Health (choose one)
E. Mental and Physical Health (choose one)

PSYC 210 Communication and Counseling Skills - 2 Credits

PSYC 322 Health Psychology - 2 to 4 Credits

PSYC 342 Psychopathology - 4 Credits

PSYC 471 Child Psychopathology - 3 Credits

PSYC 472 Child Interventions - 3 Credits

Select additional electives from the content groups.

Total credit hours required (minimum) 40

Clinical/Counseling Psychology Concentration

Foundational Core (14 credit hours)

A. Biological (4 credit hours)
A. Biological (4 credit hours)

PSYC 330 Neuropsychology - 4 Credits

B. Learning and Cognitive Processes (4 credit hours)
B. Learning and Cognitive Processes (4 credit hours)

PSYC 251 Principles of Learning and Behavior Modification - 4 Credits

PSYC 311 Sensation and Perception - 4 Credits

PSYC 332 Cognitive Processes - 4 Credits

C. Developmental (4 credit hours)
C. Developmental (4 credit hours)

PSYC 118 Introduction to Adult Development and Aging - 4 Credits

PSYC 261 Cognitive Development - 4 Credits

PSYC 262 Social Development - 4 Credits

D. Social and Personality (4 credit hours)
D. Social and Personality (4 credit hours)

PSYC 341 Theories of Personality - 4 Credits

PSYC 372 Psychology of Gender - 4 Credits

E. Mental and Physical Health (take all; 6 credit hours)
E. Mental and Physical Health (take all; 6 credit hours)

PSYC 210 Communication and Counseling Skills - 2 Credits

PSYC 342 Psychopathology - 4 Credits

PSYC 491 Clinical Procedures - 4 Credits

PSYC 492 Clinical Practicum - 4 Credits

Total credit hours required (minimum) 44

Experimental Psychology Concentration

Foundational Core (14 credit hours)

A. Biological (4 credit hours)
A. Biological (4 credit hours)

PSYC 330 Neuropsychology - 4 Credits

B. Learning and Cognitive Processes (8 credit hours)
B. Learning and Cognitive Processes (8 credit hours)

PSYC 251 Principles of Learning and Behavior Modification - 4 Credits

PSYC 311 Sensation and Perception - 4 Credits

PSYC 332 Cognitive Processes - 4 Credits

C. Developmental (4 credit hours)
C. Developmental (4 credit hours)

PSYC 118 Introduction to Adult Development and Aging - 4 Credits

PSYC 261 Cognitive Development - 4 Credits

PSYC 262 Social Development - 4 Credits

D. Social and Personality (4 credit hours)
D. Social and Personality (4 credit hours)

PSYC 341 Theories of Personality - 4 Credits

PSYC 372 Psychology of Gender - 4 Credits

E. Mental and Physical Health (choose one)
E. Mental and Physical Health (choose one)

PSYC 210 Communication and Counseling Skills - 2 Credits

PSYC 322 Health Psychology - 2 to 4 Credits

PSYC 342 Psychopathology - 4 Credits

PSYC 471 Child Psychopathology - 3 Credits

PSYC 472 Child Interventions - 3 Credits

PSYC 411 Advanced Psychological Research Methods and Statistics - 4 Credits

PSYC 412 Research Practicum - 4 Credits

Total credit hours required (minimum) 44

Child Psychology Concentration

Foundational Core (14 credit hours)

A. Biological (4 credit hours)
A. Biological (4 credit hours)

PSYC 330 Neuropsychology - 4 Credits

B. Learning and Cognitive Processes (4 credit hours)
B. Learning and Cognitive Processes (4 credit hours)

PSYC 251 Principles of Learning and Behavior Modification - 4 Credits

PSYC 311 Sensation and Perception - 4 Credits

PSYC 332 Cognitive Processes - 4 Credits

C. Developmental (8 credit hours)
C. Developmental (8 credit hours)

PSYC 261 Cognitive Development - 4 Credits

PSYC 262 Social Development - 4 Credits

D. Social and Personality (4 credit hours)
D. Social and Personality (4 credit hours)

PSYC 282 Social Psychology - 4 Credits

PSYC 341 Theories of Personality - 4 Credits

PSYC 372 Psychology of Gender - 4 Credits

E. Mental and Physical Health (choose one)
E. Mental and Physical Health (choose one)

PSYC 210 Communication and Counseling Skills - 2 Credits

PSYC 322 Health Psychology - 2 to 4 Credits

PSYC 342 Psychopathology - 4 Credits

Concentration specific: Complete one course from each of the following three groups (9 credit hours)

PSYC 320 Parenting Seminar - 2 to 3 Credits

PSYC 471 Child Psychopathology - 3 Credits

PSYC 472 Child Interventions - 3 Credits

PSYC 485 Practicum - 2 to 4 Credits

PSYC 492 Clinical Practicum - 4 Credits

Total credit hours required (minimum) 45

Industrial/Organizational Psychology Concentration

Foundational Core (14 credit hours)

A. Biological (4 credit hours)
A. Biological (4 credit hours)

PSYC 330 Neuropsychology - 4 Credits

PSYC 251 Principles of Learning and Behavior Modification - 4 Credits

PSYC 311 Sensation and Perception - 4 Credits

PSYC 332 Cognitive Processes - 4 Credits

C. Developmental (4 credit hours)
C. Developmental (4 credit hours)

PSYC 118 Introduction to Adult Development and Aging - 4 Credits

PSYC 282 Social Psychology - 4 Credits

E. Mental and Physical Health (choose one)
E. Mental and Physical Health (choose one)

PSYC 210 Communication and Counseling Skills - 2 Credits

PSYC 322 Health Psychology - 2 to 4 Credits

PSYC 342 Psychopathology - 4 Credits

Concentration Specific:
Concentration Specific:

PSYC 302 Psychological Measurement - 2 or 4 Credits

PSYC 362 Industrial/Organizational Psychology - 4 Credits

* ACCT 211 Financial Accounting - 3 Credits

* ACCT 212 Managerial Accounting - 3 Credits

* ECON 201 Principles of Microeconomics - 4 Credits

* ECON 202 Principles of Macroeconomics - 3 Credits

ECON 420 Healthcare Economics - 3 Credits

* FIN 348 Managerial Finance - 3 Credits

MGMT 305 Gender and Organizations - 3 Credits

MGMT 318 Gender Equity in Business - 3 Credits

* MGMT 328 Management & Organizational Behavior - 3 Credits

MGMT 472 Human Resource Management - 3 Credits

* MGMT 484 Operations Management - 3 Credits

* MKTG 221 Marketing Principles and Management - 3 Credits

MKTG 452 Market Research - 3 Credits

MKTG 479 Consumer Behavior - 3 Credits

MKTG 482 Sales Management - 3 Credits

Total credit hours required (minimum) 48

NOTE: Take all of the courses marked with an asterisk (*) to earn a minor in Business Administration and be eligible for the 4+1 Psychology + MBA program

Gerontology

Our nation is “graying” at a dramatic rate. In 2014, seniors aged 65+ comprised about 14.5% of the U.S. population, estimated to be around 46.2 million people. By 2050, this number will jump to about 21% or 87 million individuals, so that 1 out of every 5 Americans will be 65 years old or older!

As these generations retire, there will be an increased demand for professionals in a wide variety of fields who understand issues related to the aging process. Service for the aging is already one of the fastest growing job markets.

Gerontology is the study of aging, including the biological, psychological, and sociological aspects of the aging process. It includes the study of changes in adults as they age, the ways that society changes with an aging population, and the ways we apply this information to programs and policies for older adults.

The Gerontology major at AU will help provide you with the skills and background needed in today’s job market. In our program, you will study aging from the psychological, sociological, biological, and political perspectives, and learn about current “hot” topics facing our country, such as Social Security, retirement, community programs and the impact of an aging population on our medical and legal systems. Our multiple community connections will provide you with opportunities to gain hands-on experience through supervised internships.

Requirements for the Gerontology major
Complete all of the following:

GERO 118 Introduction to Adult Development and Aging - 4 Credits

BIOL 119 Physiology of Aging - 4 Credits

PSYC 210 Communication and Counseling Skills - 2 Credits

PSYC 371 The Psychology of Death and Dying - 4 Credits

GERO 429 Cognition and Aging - 2 Credits

GERO 485 Gerontology Internship - 4 Credits

SOCI 348 Sociology of Families - 4 Credits

Select one course from each of the following three groups:
Group I

PSYC 220 Psychological Methods and Statistics - 4 Credits

SOCI 230 Introduction to Data Analysis and Statistics - 4 Credits

Group II

SOCI 253 Social Welfare Institutions - 4 Credits

POLS 355 Public Policy - 4 Credits

PSYC 322 Health Psychology - 2 to 4 Credits

Group III

GERO 300 Special Topics in Gerontology - 2 to 4 Credits

GERO 450 Independent Study - 1 to 4 Credits

GERO 497

SOCI 470 Application of Sociology Field Work - 2 to 4 Credits

Total credit hours 34

Upon completion of this program a student will be able to:

1. Discuss the aging process from a biological, psychological, and sociological perspective.
2. Articulate measurement concerns commonly encountered when dealing with older adults and methods used to address those concerns (e.g., cohort effects).
3. Discuss major theorists and theories prominent in research in aging, and key contemporary issues within the field of gerontology.
4. Identify commonly held misconceptions regarding aging and provide correct information.
5. Articulate the impact of policy issues on lives/welfare of older adults, work collaboratively with older persons, local government, and community organizations to advocate building age-friendly communities and programs, analyze policy to address key issues and methods to improve the quality of life of older persons and their caregivers/ families, and identify key historical and current policies that influence service provision and support the well-being of older persons.

Minors

Psychology

Requirements for the minor in Psychology
Foundational Core (take all; 8 credit hours)

PSYC 101 Introduction to Psychology - 4 Credits

PSYC 220 Psychological Methods and Statistics - 4 Credits

AB. Biological, Learning & Cognitive Processes (4 credits)

PSYC 251 Principles of Learning and Behavior Modification - 4 Credits

PSYC 311 Sensation and Perception - 4 Credits

Gerontology

Requirements for the minor in Gerontology
Complete all of the following:

GERO 118 Introduction to Adult Development and Aging - 4 Credits

GERO 429 Cognition and Aging - 2 Credits

GERO 485 Gerontology Internship - 4 Credits

Complete one course from each of the following four groups:
Group 1

BIOL 119 Physiology of Aging - 4 Credits

PSYC 322 Health Psychology - 2 to 4 Credits

Group 2

PSYC 210 Communication and Counseling Skills - 2 Credits

PSYC 371 The Psychology of Death and Dying - 4 Credits

Group 3

GERO 300 Special Topics in Gerontology - 2 to 4 Credits

GERO 497

Group 4

SOCI 253 Social Welfare Institutions - 4 Credits

SOCI 348 Sociology of Families - 4 Credits

POLS 355 Public Policy - 4 Credits

PSYC 450 Independent Study - 1 to 4 Credits

Total credit hours 20

Biopsychology

You'll understand the science behind human behavior and how the body and mind work together. The best of our psychology and biology courses are combined to provide you with a well-rounded program to assist you as you pursue graduate school or a career in a science-related profession.

Requirements for the Biopsychology minor
A. Biology Core

BIOL 211 Cell Biology - 4 Credits

Complete one of the following:

BIOL 207 Introduction to Anatomy and Physiology I - 4 Credits

BIOL 307 Anatomy and Physiology: Nerves, Muscles, Skeleton - 4 Credits

Complete one of the following:

BIOL 130 Introduction to Human Genetics - 4 Credits

BIOL 212 Principles of Genetics - 4 Credits

B. Psychology Core
Take all 3 of the following:

PSYC 311 Sensation and Perception - 4 Credits

PSYC 322 Health Psychology - 2 to 4 Credits

PSYC 330 Neuropsychology - 4 Credits

C. Advanced Application
Take 4 credit hours from the following:

BIPY 485 Practicum or Internship - 1 to 4 Credits

BIPY 499 Thesis - 1 to 4 Credits

Total credit hours 28

Social Sciences

Majors

Criminal Justice Studies

The interdisciplinary Criminal Justice Studies major attracts students who want to study the criminal justice system and key criminal justice actors, processes, and institutions. Courses in the major examine such topics as criminal behavior, social and governmental efforts at control, and practices developed to rehabilitate offenders. In general, students learn the application of social science findings in an effort to evaluate and analyze contemporary criminal justice issues. Courses in the major draw on a number of different disciplines in the social sciences, including Sociology and Political Science. The major also provides for practical experience through coursework that encourages students to apply classroom knowledge to actual situations in the field.

Requirements for Criminal Justice Studies major
I. Core courses (24 credit hours)

SOCI/SJST 110

*SOCI 245 Crime and Society - 4 Credits

*SOCI/SJST 344 Sociology of Deviance - 4 Credits

POLS 232 Judicial Processes - 4 Credits

* CRIM/SJST 340 Concepts of Penology - 4 Credits

* CRIM 351 Seminar in Criminal Behavior - 4 Credits

II. Electives (20 credit hours)

* ANTH 312 Violence and Culture - 4 Credits

* CRIM 322 Juvenile Justice - 2 Credits

* CRIM 332 Focusing on Police - 2 Credits

CRIM 400 Special Topics - 1 to 4 Credits

CRIM 450 Independent Study - 1 to 4 Credits

CRIM 470 Field Work in Criminal Justice Studies - 2 to 4 Credits

ENVS 220 Introduction to Geographic Information Systems - 4 Credits

PHIL 281 Ethics - 4 Credits

POLS/SOCI 230 Introduction to Data Analysis and Statistics - 4 Credits

POLS 242 Approaches to Law - 4 Credits

POLS 313 State and Local Politics - 4 Credits

* POLS/SJST 316 American Constitutional Law and Politics - 4 Credits

POLS 355 Public Policy - 4 Credits

POLS 373 Terrorism and International Security - 4 Credits

* PSYC 282 Social Psychology - 4 Credits

* PSYC 342 Psychopathology - 4 Credits

* SOCI 235 Socialization - 4 Credits

* SOCI 242 Social Problems - 4 Credits

SOCI/WGST 253 Social Welfare Institutions - 4 Credits

* SOCI 343 Race & Ethnicity - 4 Credits

* SOCI/SJST 355 Power, Privilege, & Inequality - 4 Credits

* SOCI/POLS 431 Research Design and Strategies - 4 Credits

SPAN 301 Advanced Conversation and Composition - 4 Credits

III. Institutes

In addition to completing the foregoing courses, the Criminal Justice Studies major is required to attend at least two institutes. An institute is typically a half-day session or workshop, offered at least once per year, but, usually once each semester. Institutes deal with specific issues facing professionals in the criminal justice system.

Total credit hours 44

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

* these courses have prerequisites; see course descriptions

Upon completion of this program a student is able to:

1. Articulate key concepts and approaches in criminal justice studies
2. Identify key criminal justice actors, processes, and institutions at the local, state, and federal levels within the United States
3. Describe the historical framework upon which current American criminal justice practices are built
4. Explain the nature and causes of crime

5. Evaluate and analyze contemporary criminal justice issues and their implications for society
6. Critically think about complex issues and communicate them effectively in both oral and written form

Political Science

The Political Science major attracts students who want to achieve a better understanding of the political environments that shape human interaction. Majors are introduced to the dynamics of politics both domestically and globally. Along with an understanding of political processes, they acquire a theoretical background for the study of political dynamics and the basic quantitative and qualitative tools for analyzing them. In addition to helping students prepare for graduate study, the major helps to prepare students for the world of work in government service, legal study, business, non-governmental organizations (NGOs), journalism, or teaching.

Requirements for Political Science Major
I. Core Courses

POLS 110 American Politics - 4 Credits

POLS/SOCI 230 Introduction to Data Analysis & Statistics - 4 Credits

POLS 271 World Politics - 4 Credits

II. Core Subject Areas

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

American Politics:

POLS 313 State and Local Politics - 4 Credits

* POLS 318 The Presidency - 4 Credits

POLS 331 Parties and Elections - 4 Credits

* POLS 411 Bureaucracy - 4 Credits

Political Thought:

POLS 340 Classical Political Theory - 4 Credits

POLS/PHIL/SJST 341 Modern Political Theory - 4 Credits

* POLS/SJST 346 American Political Thought - 4 Credits

Comparative and International Politics:

POLS 253 Dictatorship and Democracy - 4 Credits

POLS/GLBS 351 European Politics - 4 Credits

POLS/HIST 382 Latin American Politics - 4 Credits

III. Elective courses
Twelve additional credit hours in Political Science from core subject area courses or the following courses:

POLS 200 Special Topics - 1 to 4 Credits

POLS/ENVS/SOCI 214 Environment, Politics & Society - 4 Credits

POLS 232 Judicial Processes - 4 Credits

POLS/COMM/SOCI 237 Media & Politics - 4 Credits

POLS 242 Approaches to Law - 4 Credits

POLS 300 Special Topics - 1 to 4 Credits

POLS/PHIL/SJST 304 Equality - 2 Credits

*POLS/SJST 316 American Constitutional Law and Politics - 4 Credits

POLS/HIST 321 History of Fascism - 4 Credits

POLS/HIST/PHIL 329 Revolution & Culture: Hegel, Marx, Nietzsche - 4 Credits

POLS 355 Public Policy - 4 Credits

POLS/SJST/SOCI 356 Movements - 4 Credits

POLS 373 Terrorism and International Security - 4 Credits

POLS 400 Special Topics - 1 to 4 Credits

*POLS 417 American Civil Liberties - 2 Credits

*POLS/SOCI 420 Social Theory - 4 Credits

POLS/SOCI 431 Research Design & Strategies - 4 Credits

POLS 450 Independent Study - 1 to 4 Credits

Total credit hours 36

* these courses have prerequisites; see course descriptions

Upon completion of this program a student is able to:

1. Demonstrate an understanding of the major concepts and methods used in the study of the politics of the United States.
2. Demonstrate an understanding of the major concepts and methods used in the study of international and comparative politics.
3. Demonstrate an understanding of the major concepts and methods used in the study of political theory.
4. Demonstrate the ability to see the relationships between their own situation and their political, cultural, and social environment.
5. Demonstrate effective oral and written communication skills, including the capacity to form an argument and defend it with evidence.
6. Evaluate the nature and quality of their own arguments/evidence and the arguments/evidence of others

Political Science Major – Education Track

Students seeking to major in Political Science in preparation for a career in middle/adolescent education (grades 7-12) can combine a Political Science Education Track academic major with a minor in Education. The requirements for a Political Science Education Track major are listed below.

Requirements for Political Science Major—Education Track
Requirements for Political Science Major—Education Track

POLS 110 American Politics - 4 Credits

POLS/SOCI 230 Introduction to Data Analysis & Statistics - 4 Credits

POLS 271 World Politics - 4 Credits

II. Core Subject Areas

At least one course from each of the following two groups:

POLS 313 State and Local Politics - 4 Credits

* POLS 318 The Presidency - 4 Credits

POLS 331 Parties and Elections - 4 Credits

* POLS 411 Bureaucracy - 4 Credits

POLS 340 Classical Political Theory - 4 Credits

POLS/PHIL/SJST 341Modern Political Theory - 4 Credits

*POLS/SJST 346 American Political Thought - 4 Credits

III. Elective courses
III. Elective courses

POLS 200 Special Topics - 1 to 4 Credits

POLS/ENVS/SOCI 214 Environment, Politics & Society - 4 Credits

POLS 232 Judicial Processes - 4 Credits

POLS/COMM/SOCI 237 Media & Politics - 4 Credits

POLS 242 Approaches to Law - 4 Credits

POLS 300 Special Topics - 1 to 4 Credits

POLS/PHIL/SJST 304 Equality - 2 Credits

*POLS/SJST 316 - American Constitutional Law and Politics - 4 Credits

POLS/HIST 321 History of Fascism - 4 Credits

POLS/HIST/PHIL 329 Revolution & Culture: Hegel, Marx, Nietzsche - 4 Credits

POLS 355 Public Policy - 4 Credits

POLS/SJST/SOCI 356 Movements - 4 Credits

POLS 373 Terrorism and International Security - 4 Credits

POLS 400 Special Topics - 1 to 4 Credits

*POLS 417 American Civil Liberties - 2 Credits

POLS/SOCI 420 Social Theory - 4 Credits

POLS/SOCI 431 Research Design & Strategies - 4 Credits

POLS 450 Independent Study - 1 to 4 Credits

IV. Two courses in related social sciences and geography
IV. Two courses in related social sciences and geography

ECON 201 Principles of Microeconomics - 4 Credits

GEOL 101 This Dynamic Earth - 4 Credits

V. Four Courses in History
V. Four Courses in History

HIST 110 The Making of Europe - 4 Credits

HIST 111 Modern Western History - 4 Credits

HIST 211 American History I - 4 Credits

HIST 212 American History II - 4 Credits

Total credit hours 52

* these courses have prerequisites; see course descriptions

Sociology

The Sociology major attracts students who want to better understand themselves, others, and the social, cultural, political, and economic environments within which social interaction occurs. The sociological method makes possible the systematic comparison of data from various types of groups, societies, cultures, and social institutions. Sociology majors take coursework in both theory and methods, allowing them to formulate generalizations about the nature and causes of human social behavior. Majors also participate, when feasible, in experiential learning opportunities. In addition to helping students prepare for graduate study, the major helps prepare students for careers in such areas as social work, law, public health, business, and social research.

Requirements for Sociology major
I. Core Courses (16 credit hours)

SOCI/SJST 110 Introduction to Sociology - 4 Credits **Or**
ANTH 110

SOCI/POLS 230 Introduction to Data Analysis & Statistics - 4 Credits

* SOCI/POLS 420 Social Theory - 4 Credits

* SOCI/POLS 431 Research Design and Strategies - 4 Credits

II. Elective Courses (20 credit hours)

SOCI 200 Special Topics - 1 to 4 Credits

SOCI/POLS/ENVS 214 Environment, Politics & Society - 4 Credits

* SOCI 235 Socialization - 4 Credits

* SOCI 236 Cults, Sects, and the Main Line - 4 Credits

* SOCI 242 Social Problems - 4 Credits

*SOCI 245 Crime & Society - 4 Credits

SOCI/WGST 253 Social Welfare Institutions - 4 Credits

SOCI 343 Race and Ethnicity - 4 Credits

* SOCI/SJST 344 Sociology of Deviance - 4 Credits

* SOCI/WGST 346 Sociology of Sex and Gender - 4 Credits

* SOCI/WGST 348 Sociology of Families - 4 Credits

*SOCI/SJST 349 Sociology of Health, Illness, & Dis/ability - 4 Credits-

*SOCI/SJST 355 Power, Privilege & Inequality - 4 Credits

SOCI 400 Special Topics - 1 to 4 Credits

SOCI 450 Independent Study - 1 to 4 Credits

SOCI 470 Application of Sociology Field Work - 2 to 4 Credits

* SOCI/GLBS 495 Global Issues Seminar - 4 Credits

ANTH 302 The Nacirema - 4 Credits

*ANTH 303 Health and Culture - 4 Credits

* ANTH 304 Language and Culture - 4 Credits

* ANTH 312 Violence and Culture - 4 Credits

Total credit hours 36

* these courses have prerequisites; see course descriptions

Upon completion of this program a student is able to:

1. Demonstrate an understanding of the sociological imagination and other major concepts defining the sociological approach to society.
2. Demonstrate an understanding of both qualitative and quantitative research methods.
3. Demonstrate the ability to see the relationships between their own situation and the political, cultural, and social environment within American society and cross-culturally.
4. Establish effective oral and written communication skills, including the capacity to form an argument and defend it with evidence.
5. Evaluate the nature and quality of their own arguments/evidence and the arguments/evidence of scholars, peers, and public media.

Minors

Anthropology

The Anthropology minors in Biological Anthropology and Cultural Anthropology attract students who want to explore cultural diversity across the globe and through time. These minors are designed to complement student course work in related disciplines or in interdisciplinary programs. Anthropology courses emphasize the application of the anthropological perspective in understanding present-day social issues.

Biological Anthropology

The minor in Biological Anthropology anchors humans in the natural world by emphasizing our evolutionary and genetic past as well as our relationships with other primates. Courses on human health, animal behavior, and comparative anatomy, as well as ecological and environmental perspectives, are among the varied dimensions of this broad minor.

Requirements for the Biological Anthropology minor
Requirements for the Biological Anthropology minor

ANTH 120 Human Origins - 4 Credits

BIOL 130 Introduction to Human Genetics - 4 Credits

ANTH 300 Special Topics - 1 to 4 Credits

* ANTH 303 Health & Culture - 4 Credits

* BIOL 315 Genetics and Evolution of Populations - 4 Credits

* BIOL 348 Animal Behavior - 4 Credits

* BIOL 375 Comparative Vertebrate Biology - 4 Credits

PSYC 330 Neuropsychology - 4 Credits

PSYC 351 Human Sexuality - 4 Credits

Total credit hours 20

* these courses have prerequisites; see course descriptions

Cultural Anthropology

The minor in Cultural Anthropology grounds students in the broad perspectives, subject matter, and methods of the discipline. It gives students the option of core course work in two of the main fields of anthropology (cultural and biological) or allows students to focus more on cultural and linguistic anthropology, and related topics in two additional elective courses. The anthropological view on cultures, both large and small, modern and traditional, emphasizes comparative, holistic, historical, and multidisciplinary frames of analysis. Advanced study of a language and study abroad are always encouraged to add depth to these minors.

Requirements for the Cultural Anthropology minor
Requirements for the Cultural Anthropology minor

ANTH 110 Cultural Anthropology - 4 Credits

ANTH 120 Human Origins - 4 Credits **Or**
* ANTH 304 Language and Culture - 4 Credits

ANTH 200/300 Special Topics - 1 to 4 Credits

ANTH 302 The Nacirema - 4 Credits

* ANTH 303 Health and Culture - 4 Credits

ANTH 311 Nip, Tuck, Perm, Pierce, Tattoo, Embalm - 2 Credits

* ANTH 312 Violence and Culture - 4 Credits

ANTH 450 Independent Study - 1 to 4 Credits

* ANTH 470 Field Work - 2 or 4 Credits

* ANTH 495 Global Issues Seminar - 4 Credits

ARTH 200/300/400 Special Topics - 1 to 4 Credits

ARTH 304 Global Arts: Contemporary Asia - 4 Credits

ARTH 305 South Asian Arts 15-20c: Mughals to Modern - 4 Credits

Total credit hours 16

* these courses have prerequisites; see course descriptions

Criminal Justice Studies

Requirements for the Criminal Justice Studies minor
I. Core Courses (12 credit hours)

*CRIM 340 Concepts of Penology - 4 Credits

SOCI 110 Introduction to Sociology - 4 Credits

SOCI 245 Crime and Society - 4 Credits

II. Electives (8 credit hours)

*CRIM 322 Juvenile Justice - 2 Credits

*CRIM 332 Focusing on Police - 2 Credits

POLS 110 American Politics - 4 Credits

POLS 232 Judicial Processes - 4 Credits

*SOCI 242 Social Problems - 4 Credits

SOCI 253 Social Welfare Institutions - 4 Credits

*SOCI 344 Sociology of Deviance - 4 Credits

SOCI 355 Power, Privilege, and Inequality - 4 Credits

*these courses have prerequisites; see course descriptions

Total credit hours 20

Political Science

Requirements for the minor in Political Science

POLS 110 American Politics - 4 Credits

POLS 271 World Politics - 4 Credits **Or**
POLS 271 World Politics - 4 Credits

Plus twelve additional hours in Political Science

Total credit hours 20

Public Law

Requirements for the minor in Public Law

POLS 110 American Politics - 4 Credits

POLS 232 Judicial Processes - 4 Credits

* POLS 316 American Constitutional Law & Politics - 4 Credits

plus one course from the following:

POLS 242 Approaches to Law - 4 Credits

POLS 313 State and Local Politics - 4 Credits

* SOCI 245 Crime and Society - 4 Credits

Total credit hours 16

* these courses have prerequisites; see course descriptions

Science Policy

The minor in Science Policy provides a policy component for students majoring in engineering or science. This is especially important today given the role government plays in terms of both supporting and regulating business. Science policy minors must be majors in either an engineering field or in chemistry, biology, physics, or environmental studies.

Required courses for Science Policy minor:

POLS 110 American Politics - 4 Credits

POLS 355 Public Policy - 4 Credits

POLS 411 Bureaucracy - 4 Credits

* Experiential Capstone Project - 2 or 4 Credits

* To be determined under advisement

Total Credit Hours 14-16

Sociology

Requirements for the minor in Sociology

SOCI 110 Introduction to Sociology - 4 Credits

* SOCI 420 Social Theory: A Survey - 4 Credits

* SOCI 431 Research Design and Strategies - 4 Credits

Eight additional credit hours

* these courses have prerequisites; see course descriptions

Total credit hours 20

Women’s and Gender Studies

The minor provides a theoretical and practical structure within which to study issues and scholarship relating to women and gender, promotes an understanding of the historical and biosocial contexts that shape our awareness of gender, and encourages independent reading about and the study of women's and gender issues around the world. It also encourages an exploration of the many positions possible within as well as outside the body of work considered women's and gender studies.

Faculty from throughout the university and across disciplines participate in the program, exposing students to a variety of conceptual frameworks, experiences, personal styles, ideas, and issues. Students complete an independent study project in their senior year, which serves as a capstone experience.

Minor

Women’s and Gender Studies

Requirements for the minor
Required Courses

WGST 101 Women and Gender in Society - 4 Credits

WGST 450 Independent Study - 1 to 4 Credits

Elective Courses

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

I: Humanities
Communication Studies

COMM 412 Gender in American Film - 4 credits

English

WGST 254 Women Writers - 2 or 4 Credits

WGST 256 Multicultural American Literature - 4 Credits

WGST 400 Major Figures: Faulkner / Morrison - 4 Credits

WGST 400 Major Figures: Jane Austen - 4 Credits

WGST 400 Major Figures: Virginia Woolf - 4 Credits

WGST 400 Major Figures: Joyce/Woolf - 4 Credits

WGST 300 Major Figures: Scribbling Women: Child, Dickinson, Cather, Hurston - 4 credits

WGST 460 Modernist Women Writers - 4 credits

WGST 481 International Women Writers - 4 Credits (also satisfies Global Perspective)

History

WGST 300 Topics: Women’s History - 4 Credits

WGST 324 Queer American History - 4 Credits

WGST 360 Sex, Power and Politics – 4 credits

Modern Languages

WGST 300 Topics: French Women Writers - 4 Credits

II: Social Sciences
Management

WGST 305 Gender and Organizations - 3 Credits

WGST 318 Gender Equity in Business - 3 credits

Psychology

WGST 320 Parenting Seminar - 2 Credits

WGST 351 Human Sexuality - 4 Credits

WGST 372 Psychology of Gender - 4 Credits

Sociology

WGST 253 Social Welfare Institutions - 4 Credits

WGST 346 Sociology of Sex and Gender - 4 Credits

WGST 348 Sociology of Families - 4 Credits

III: Fine and Performing Arts
Art History

WGST 300 Topics: Women in Medieval and Renaissance Art - 4 Credits

WGST 382 Gender and Art History: Feminist Art in a Global Frame - 4 Credits

Performing Arts

WGST 211 Women in Theatre, Society and Politics - 3 Credits

WGST 217 Queering the Pitch - 2 Credits

PD&T 222 Stage Makeup & Theory: a Different Way of Seeing Skin – 4 credits

Performing Arts Division

The Performing Arts Division provides collaborative, rigorous and contemporary programs across Music, Theatre, Dance, and Performance Design & Technology. For makers and performers, the Performing Arts Division fosters discovery, ideas, and creativity through innovative learning. Students co-create [live] art.

As practitioners, researchers, and scholars, faculty members foster depth of discovery and life-long learning. Each program is designed to be inclusive of all stages of skill, ability, and experience, while facilitating student mastery at all levels.

General Education

Students majoring in Theatre complete the Bachelor of Arts General Education program of the College of Liberal Arts and Sciences. Students majoring in Music complete the Bachelor of Arts General Education program.

Majors

Music

Through the Performing Arts Division, the Music Department offers a Bachelor of Arts (BA) in with a major in Music and a Music minor. The Music Department offers experiences in applied music (private lessons) in various instruments and voice, ensembles (including orchestra, choir band, and small ensembles), and unique and innovative courses music courses that explore various musical topics that embody the Alfred University philosophy of “outside of ordinary.”

The purpose of the BA in Music is to foster scholarship through the discipline of music. It is designed for students who wish to achieve a high level of musical skill and knowledge by majoring in music within the context of a liberal arts education. Students who graduate from this program are able to pursue graduate study or relevant careers in music or pursue graduate opportunities in other fields.

The flexibility of the BA in Music degree allows for double major or dual degree. Music majors who complement their electives strategically and complete a business minor may be eligible for admission into the Master of Business Administration (MBA) 4 + 1 program.

Students who enroll in the BA in Music will have completed experiences in private applied instruction, multiple and diverse ensemble experiences, innovative and creative music courses, which will culminate in a senior recital or capstone experience; an experience which elucidates the student’s individual interests and creativity within their experience with music.

Upon completion of the BA in Music, students will be able to demonstrate the following:

1. Demonstrate technical and artistic proficiency on a primary instrument or voice;
2. Contribute positively to musical ensembles and collaborate effectively with fellow ensemble members and ensemble directors;

3. Use their knowledge and skills from performance, music theory, and music history to write critically about musical works and concepts;
4. Demonstrate familiarity with the major composers, performers, musical styles, and cultural trends of all periods in the history of Western music.

Requirements for the Music Major
Core Courses

- MUSC 120 Fundamentals of Music & Tech - 4 Credits
- MUSC 220 Music Theory II - 4 Credits
- MUSC 225 Music History I: from Medieval to Mozart - 4 Credits
- MUSC 226 Music History II: Romanticism to the 20th Century - 4 Credits
- MUSC 320 Music Theory III - 3 Credits
- MUSC 130 Beginning Class Piano I - 2 Credits
- MUSC 131 Beginning Class Piano II - 2 Credits
- MUSC 100-108 Applied Lessons - 2 Credits minimum
- MUSC 300-308 Advanced Applied Lessons - 4 Credits minimum
- MUSC 271-279 Ensembles
- MUSC 495 Senior Recital - 1 Credit

Electives (8 credit hours)

- MUSC 133 Music of the Guzheng - 2 Credits
- MUSC 200 Special Topics - 1 to 4 Credits
- MUSC 211 World Music - 4 Credits
- MUSC 212 American Music - 4 Credits
- MUSC 213 Introduction to Jazz - 2 Credits
- MUSC 214 Reel Music in America - 4 Credits
- MUSC 215 History of Rock Music - 2 Credits
- MUSC 216 Queering the Pitch - 2 Credits
- MUSC 217 Cultural Competencies in Music - 4 Credits

Total credit hours required for the Music Major: 40

Theatre

The Theatre Major at Alfred University is a collaborative and innovative program, where students work closely with others to create powerful, interdisciplinary performance. Theatre students deeply investigate process, inspiring and challenging themselves to change the world around them through art. The Alfred University Theatre experience integrates theory with practical development of skills, techniques, and creative expression; students acquire in-depth understanding of theatre’s many components and how they work together. Learning experiences are anchored in well-rounded knowledge acquired through courses, production experiences, visiting artists, and instruction by faculty who are also active practitioners in their field. Offering rigorous training, world-class facilities and a dedicated, mentor model of teaching, the Theatre program offers young artists a unique, ensemble-based program that prepares them for both graduate study and the world of contemporary theatre.

Upon completion of this program students will be able to:

1. Understand the necessity of and the power of genuine collaboration in making theatre;
2. Demonstrate depth of skill in acting, directing, movement, voice, dramaturgy, ensemble-based performance and devised theatre-making;
3. Expand and apply practice-as-research techniques across different areas of theatre-making;
4. Gain a thorough, scholarly understanding of key artistic movements across cultures that have influenced and shaped contemporary theatre practice;
5. Develop a basic, solid foundation in design and production management principles;
6. Deepen appreciation of the expansive and interdisciplinary field of performance;
7. Exercise critical, robust and ethical thinking in analyzing the ways race, gender, class, physical differences, and socio-economic status affect the production, history, and future of theatre-making.

A Theatre Minor is also available for those students who wish to major in another field, yet pursue their passion and development as theatre artists.

Requirements for the Theatre Major
Core Requirements: (42 credits)

- THEA 110 Introduction to Theatre - 4 Credits
- THEA/PDAT 120 Technical Theatre - 4 Credits
- THEA 212 From Page to Stage: Script Analysis - 4 Credits
- THEA 240 Acting I - 4 Credits
- THEA 242 Collaborative Performance Lab - 4 Credits
- THEA 145/245 Improvisation: Just Say Yes!
- THEA 311 Theatre: History, Art, Politics and Society I - 4 Credits
- THEA 312 Theatre History: Art, Politics and Society II - 4 Credits
- THEA 330 Directing I - 4 Credits
- THEA 495 Senior Project - 2 to 4 Credits
- DANC 120 Fundamentals of Dance - 2 Credits
- Production Credit - 3 Credits

Electives in Theatre: (16 credits)
Choose 16 credits from the range of courses below to shape your area of interest as a theatre major.

- THEA 205 Playmaking: From Writing to Devising For the New Era - 4 Credits
- THEA 211 Women in Theatre, Society and Politics - 3 Credits
- PDAT 222 Stage Makeup and Theory - 4 Credits
- THEA 230 Stage Management Fundamentals - 2 Credits
- THEA 340 Acting II - 3 Credits
- THEA 440 Acting III - 3 Credits
- THEA 431 Directing II - 3 Credits
- THEA/PDAT 385 Internship - 2 to 4 Credits
- PDAT 220 Design Fundamentals for Stage, Dance and Film - 4 Credits
- PDAT 221 Making with Fabric - 3 Credits
- PDAT 223 Sound Design and Technology - 4 Credits
- PDAT 320 Scene Design - 3 Credits
- PDAT 321 Lighting Design - 3 Credits

- PDAT 322 Stage Costume Design - 3 Credits
- Dance technique (DANC 221, 222, 223, 321, 322, 323)
- DANC 230 Improvisation/Composition I - 3 Credits
- DANC 330 Improvisation/Composition II - 3 Credits
- MUSC 102 Private Lessons-Voice - 1 Credit
- MUSC 132 Beginning Voice Class I - 2 Credits
- MUSC 302 Private Lessons-Voice, Advanced - 2 Credits
- THEA 350 Independent Study - 1 to 4 Credits
- ENGL 214 Introduction to Drama - 2 or 4 Credits
- ENGL 411 Shakespeare's Comedies and Histories - 4 Credits
- ENGL 412 Shakespeare's Tragedies - 4 Credits

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

Total credit hours required for the Theatre Major: 58

Minors

Dance

The Performing Arts Division Dance Department offers students a rich and rewarding experience in the art of dance and dance making. It is open to students of all levels, regardless of experience or past training who want to include a dance practice in their academic experience. Through rigorous individual and collaborative explorations in dance, students develop skills that serve them as they pursue a variety of career and graduate school opportunities. The Program encourages interdisciplinary practices in collaboration with the visual and performing arts, as well as other disciplines across campus, drawing from strengths unique and specific to Alfred University.

Those students who want to pursue deeper studies in dance can minor in dance. The dance minor is a composition-based program focusing on the body and movement as material, technical and artistic growth, and live performance.

The Marlin Miller Dance Residency Program brings nationally and internationally acclaimed dance companies, choreographers, and artists to AU, offering unique opportunities for students to work and learn with artists of the highest caliber.

Beyond the classroom, AU has a thriving student dance culture with a variety of dance clubs. Auditions for all productions and performance groups are open to all students, regardless of academic major or experience.

Requirements for the Dance Minor
Core Courses

- DANC 120 Fundamentals of Dance - 2 Credits
- DANC 222 Modern Dance I - 2 Credits
- DANC 230 Improvisation/Composition I - 3 Credits
- DANC 211 Dance History - 4 Credits
- DANC 270 Alfred University Dance Theater (taken twice) - 4 Credits
- DANC 330 Improvisation/Composition II - 3 Credits **Or**
  DANC 331 Site Specific Composition - 3 Credits

Electives

- DANC 200 Special Topics in Dance - 1 to 4 Credits
- DANC 221 Ballet I - 2 Credits
- DANC 321 Ballet II - 2 Credits
- DANC 223 Jazz Dance I - 2 Credits
- DANC 323 Jazz Dance II - 2 Credits
- DANC 224 Contact Improvisation - 2 Credits
- DANC 225 Laban Movement Studies - 2 Credits
- DANC 226 Hip Hop Dance - 2 Credits
- DANC 322 Modern Dance II - 2 Credits
- DANC 325 Laban Movement Applications - 2 Credits
- DANC 340 New and Existing Repertory - 3 Credits
- DANC 370 Choreographic Practicum - 1 to 3 Credits
- DANC 450 Independent Study - 1 to 4 Credits

Total credit hours required for the Dance Minor: 22

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

Music

The Music Minor is a great option for students who are passionate about music and wish to study it within a liberal arts curriculum but would rather major in another field. We foster creative endeavor and critical inquiry through courses, ensembles, applied private or group study that explore music from a variety of diverse perspectives.

Requirements for the Music Minor
Core Courses

- MUSC 110 Music Appreciation - 4 Credits
- MUSC 120 Fundamentals of Music & Tech - 4 Credits
- MUSC 130 Beginning Class Piano I - 2 Credits
- MUSC 131 Beginning Class Piano II - 2 Credits
- MUSC 271-279 Music Ensembles - 4 Credits
- MUSC 101-108; 301-308 Private Lessons - 4 Credits

Note: Technique classes, such as Beginning Voice, may be substituted for one semester of private lessons.

Electives
Select 4 credit hours

- MUSC 133 Music of the Guzheng - 2 Credits
- MUSC 200 Special Topics - 1 to 4 Credits
- MUSC 211 World Music - 4 Credits
- MUSC 212 American Music - 4 Credits
- MUSC 213 Introduction to Jazz - 2 Credits
- MUSC 214 Reel Music in America - 4 Credits
- MUSC 215 History of Rock Music - 2 Credits

- MUSC 216 Queering the Pitch - 2 Credits
- MUSC 217 Cultural Competencies in Music - 4 Credits

Total credit hours required for the Music Minor: 24

Theatre

Requirements for the Theatre Minor
Core Courses

- THEA 110 Introduction to Theatre - 4 Credits
- THEA 240 Acting I - 4 Credits
- THEA 270/370 Play Production - 2 Credits
- THEA 242 Collaborative Performance Lab - 4 Credits
- THEA 212 From Page to Stage: Script Analysis - 4 Credits

Electives
Select 8 credit hours

- PDAT 120 Technical Theatre - 4 Credits
- THEA 205 Playmaking: From Writing to Devising For the New Era - 4 Credits
- THEA 211 Women in Theatre, Society and Politics - 3 Credits
- THEA 145/245 Improvisation: Just Say Yes! - 2 Credits
- THEA 311 Theatre: History, Art, Politics and Society I - 4 Credits
- THEA 312 Theatre History: Art, Politics and Society II - 4 Credits
- THEA 330 Directing I - 4 Credits
- DANC 120 Fundamentals of Dance - 2 Credits

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

Total credit hours required for the Theatre Minor: 26

Performance Design and Technology

Our Performance Design & Technology program is unique in that it stands strong as an individual area of focus while also being integral to all areas of performing arts. This allows you to explore other interests and expand beyond theatrical design into dance, performance art, site-specific work and live entertainment. As a partner with theater, this allows you greater opportunities and support as you pursue your passion and career.

Requirements for the Performance Design & Technology Minor
Foundation: The Following Sequence is Preferred (18 to 22 credit hours)

- PDAT 120 Technical Theatre - 4 Credits **Or**
  PDAT 221 Making with Fabric - 3 Credits
- THEA 212 From Page to Stage: Script Analysis - 4 Credits
- PDAT 220 Design Fundamentals for Stage, Dance and Film - 4 Credits
- * History Class (One Theatre, Dance, Art History class) - 3 to 4 Credits

- Performance Experience (One Theater, Dance or Music Performance Class or participation in Music Ensemble or Performing Arts produced performance) - 2 Credits
- PDAT 270 Play Production - 1 to 4 Credits
- PDAT 370 Advanced Play Production - 1 to 4 Credits

* Choose one from the following list of history classes: THEA 311 or THEA 312 or DANC 211 or MUSC 225 or MUSC 226 or COM 304 or ARTH 211 or two 100 level ARTH

Design/Technology Requirements (6 to 10 credit hours)
Students must complete EITHER TWO (2) Technology Courses and ONE (1) Design Course OR One (1) Technology Course and TWO (2) Design Courses. Choose from the following TECHNOLOGY Courses:

- PDAT 200 Special Topics in Performance Design and Technology - 1 to 4 Credits
- PDAT 200-01 Production Management - 4 Credits
- PDAT 222 Stage Makeup and Theory - A Different Way of Seeing Skin - 2 Credits
- PDAT 224 Entertainment Lighting: Electricity and Equipment - 2 Credits
- PDAT 225 Woodworking Techniques for the Stage - 2 Credits
- PDAT 226 Scenic Painting - 2 Credits
- PDAT 231 Prop Design and Construction - 3 Credits
- PDAT 330 Costuming on the Half Scale - 4 Credits
- COM 216

Choose from the following DESIGN Courses:

- PDAT 223 Sound Design and Technology - 4 Credits
- PDAT 228 Costume Design for Dance - 2 Credits
- THEA 230 Stage Management Fundamentals - 2 Credits
- PDAT 315 Advanced Design Seminar: Design is Dramaturgy - 2 Credits
- PDAT 320 Scene Design - 3 Credits
- PDAT 321 Lighting Design - 3 Credits
- PDAT 322 Stage Costume Design - 3 Credits
- PDAT 350 Independent Study - 2 to 4 Credits

Capstone to be completed in the student’s final year (3 credit hours)
Choose from the following:

- PDAT 470 Advanced Projects in Theatrical Design and Technology - 1 to 4 Credits
- PDAT 495 Senior Project - 2 to 4 Credits

Minimum total credit hours required for the PDAT Minor: 27

Kazuo Inamori School of Engineering

The School of Engineering offers six Bachelor of Science, six Master of Science and three Ph.D. degrees. The Bachelor of Science (BS) degree programs in Ceramic Engineering (CE), Glass Engineering Science (GES), Materials Science and Engineering (MSE), Mechanical Engineering (ME), and Renewable Engineering (RNEW) are accredited by the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone 410-347-7700. The Biomaterials Engineering (BME) is not yet accredited; however, it is expected that BME will seek ABET accreditation during the next regular review cycle. Upon graduating with a BS degree in CE, GES, MSE, RNEW, and ME, students are eligible to take the Fundamentals of Engineering (FE) examination, the next step towards registration as a Professional Engineer. Having passed the FE examination, the remaining two steps are: 1) four years of relevant post-baccalaureate experience and 2) passing the Professional Engineering (Principles and Practices) examination.
All Inamori School of Engineering faculty members have doctoral degrees, and all are engaged in teaching and research. With sponsorship from industry, government agencies and philanthropic organizations, research expenditures average ~$5M annually. Faculty members often bring recent research results or examples from industry into their classroom teaching. Undergraduate students have opportunities to participate in research programs in the School and/or to participate in co-operative education or internship programs that have developed from partnerships with industry.

General Graduation Requirements

School of Engineering General Graduation Requirements

Credit Hour and GPA Requirement

To receive a Bachelor of Science degree from the School of Engineering, students must complete at least 128 credit hours and fulfill the requirements of the major, which may involve completing more than 128 credit hours for some. Students must achieve a GPA of at least 2.0 in all engineering courses (any course offered by SoE) in addition to a cumulative GPA of at least 2.0 required by Alfred University.

Good Academic Standing

An engineering education is both process-based and sequential. Academic Progress thus requires timely and sequential completion of coursework. Students successfully completing fewer than six credits in any given semester from the respective curriculum may be dismissed from SoE and AU. This imperative for progress does not apply to: part-time students, withdrawn students, or those who successfully complete nine cumulative credits in their SoE major and another declared AU major or degree (not minor). Note that this is in keeping with Federal regulations for degree progression. Students enrolled for fewer than twelve credits from the respective curriculum and/or un-enrolled in required seminar may be put on Academic Probation.

No more than seven credits of D or D+ in engineering courses taken at Alfred University may be applied for graduation in any program in the School of Engineering for students entering the University Fall 2014 and thereafter. Accumulation of excess D or D+ grades constitutes “low grades in critical prerequisite courses” per the Academic Standing requirements in this Catalog.

Inamori School of Engineering General Education

The General Education requirement of all SoE degree programs certifies basic competencies in Written Communication, Quantitative Reasoning, Humanities, Natural Sciences, and Social Science consistent with NYSED definitions. It provides the breadth of experience for engineers to understand problems in context, i.e., in relation to historical, artistic, creative, social, and ethnic considerations. General Education comprises a minimum of 60 credits.

Written Communication:

All SoE degrees require writing competence at a second semester level, i.e., completion of ENGR 110/ENGR 108 Technical Writing. Students must successfully complete ENGL 101, or an equivalent course, or achieve specified scores on standardized tests (To view the specified scores, please visit the College of Liberal Arts and Sciences page and navigate to the General Education Requirements Tab. From there, select the Basic Competencies accordion and then the Written Communication sub-accordion). Credits earned by successfully completing ENGL 101 or an equivalent course count towards the degree credit requirements. Students must also complete ENGR 110, Technical Communications or, prior to matriculation at Alfred University, complete the equivalent of ENGL 102 Writing II (achievement of specified test scores also meets the ENGR 110 requirement). An ENGR 102 equivalent shall also be accepted in place of ENGR 110/108 for AU students with a declared double degree when ENGR 110/108 is not accepted by the non-SoE degree.

Quantitative Reasoning:

All programs in SoE require completion of a minimum of twelve Quantitative Reasoning credits, e.g., MATH 151, MATH 152, and MATH 253. At least one course must address statistics, i.e., ENGR 305/ENGR 202, BUSI 113, or MATH 381 (only one of these may be applied to any program). Note that the specific degree requirements for all SoE degrees exceed this minimum requirement. The credits from these additional specific requirements contribute to the General Education total.

Humanities:

All programs in SoE require completion of a minimum of six Humanities credits, from at least two different departmental acronyms. Acronyms of cross-listed courses will be determined from the actual course of registration.

Natural Sciences:

All programs in SoE require completion of a minimum of twelve Natural Science credits, e.g., CHEM 105, CHEM 105L, CHEM 106, CHEM 106L, PHYS 125, and PHYS 125L. Note that the specific degree requirements for all SoE degrees exceed this minimum requirement. The credits from these additional specific requirements contribute to the General Education total.

Social Sciences:

All programs in SoE require completion of a minimum of three Social Science credits. Note that the specific degree requirements may require other Social Sciences courses to meet specific SoE degree program requirements. The credits from these additional specific requirements contribute to the General Education total.

Common Ground:

All programs in SoE require completion of UNIV 101 Common Ground (one credit).

AU Wellness:

The AU Wellness requirement is a component of SoE General Education. WELL credits contribute towards the General Education total.
The on-line course system (Banner/DegreeWorks) provides information about which courses possess which attributes.

Seminar Requirement

Students must successfully complete eight total semesters of: ENGR 160 (maximum of two), ENGR 260 (maximum of one), ENGR 360, and/or COOP 385 with one semester credited for each 16 applicable credits of part-time and/or transfer work.

Technical Electives:

All SoE programs require some number of technical electives. These are defined as: (A) Most 300- and 400-level courses designated CEMS, CHEM, ELEC, ENGR, MATH, MECH, PHYS, or RNEW. Exceptions include MATH 331, and Topics courses unless approved by the Dean. (B) One of FIN 348 or MGMT 328, (C) COOP 385. Note that students may only apply one of CHEM 343, CEMS 204, CEMS 235, or MECH 320 to any degree.

Program Specific Electives:

Many SoE programs require courses to be selected from a restricted list. These courses are specified for the relevant majors.

Majors

Engineering Major Requirements

Biomaterials Engineering (BME)

Innovation and advancement in materials is essential to fulfill the demands of the medical field, and the diverse research areas within the fields of biology and regenerative medicine. Implantable devices such as artificial joints, pacemakers, cardiovascular stents and drug delivery materials must be biocompatible while facilitating chemical, mechanical and/or electrical functions within the biological environment. Implantable materials can be designed to eradicate harmful microbes, facilitate unique mechanical functions, or biodegrade to encourage cell growth and proliferation. The goal of the Biomaterials Engineering curriculum within the School of Engineering is to train next-generation Biomaterials Engineers to relate the fundamental principles of materials science and engineering to the complex biological environments in which they are expected to perform. Promoting the integration of living tissues with non-living materials is a growing area of research, and these interactions are crucial for the successful implantation of long-term materials for medical applications. The curriculum is a unique fusion of materials science and engineering and an array of the biological sciences that puts students ahead of the curve in areas such as biomaterials engineering, biotechnology, tissue engineering and regenerative medicine. In addition to opening the door to countless technical and regulatory careers, it also provides outstanding preparation for dental school, medical school, law school, or the MBA.

BME Program Objectives

It is expected that, during the first few years after graduation:

1. Graduates will be qualified for careers in the medical device industry alongside related, and general, materials fields. Graduates will occupy positions with high technical skill requirements and managerial responsibility.
2. Graduates will be prepared to continue their educational endeavors in both technical and non-technical fields including graduate studies in Biomedical Engineering, Tissue Engineering, medical Devices, general materials and other science and engineering majors; MBA programs, medical and veterinary schools, law school or short course/workshops applicable to growth within a chosen technical field.
3. Graduates will be prepared to lead in the development of their professions including society activities, scholarly publications and student recruiting and mentoring.

BME Degree Requirements and Curriculum

In addition to Alfred University’s Fitness and Global Perspective requirements, and the School of Engineering general and seminar requirements, the requirements for the Bachelor of Science in Biomaterials Engineering are:

BIOL 150 Biological Foundations - 4 Credits

BIOL 211 Cell Biology - 4 Credits

CEMS 214 Structure and Properties of Materials - 3 Credits **Or**
ENGR 204

CEMS 215 Microscopy and Microstructural Characterization - 3 Credits

CEMS 216 Bonding and Structure of Materials - 3 Credits **Or**
CEMS 206

CEMS 235 Thermodynamics of Materials - 4 Credits **Or**
CEMS 204 **Or**
*MECH 320 Thermodynamics I - 3 Credits

CEMS 237 Thermal Processes in Materials - 4 Credits **Or**
CEMS 304

**CEMS 251 Mechanics of Materials - 3 Credits

CEMS 334 Introduction to Polymers - 3 Credits

CEMS 336 Physical Metallurgy I - 3 Credits

CEMS 342 Thermal and Mechanical Properties - 4 Credits

CEMS 344 Properties II: Electrical, Magnetic, and Optical - 4 Credits

CEMS 368 Introduction to Bioengineering - 3 Credits

CEMS 465 Biocompatibility - 4 Credits **Or**
CEMS 464

CEMS 466 Skeletal Tissue - 3 Credits **Or**
CEMS 460

CHEM 105 General Chemistry I - 3 Credits **Or**
*CHEM 103 Chemistry I - 4 Credits

CHEM 105L General Chemistry I Laboratory - 1 Credit

CHEM 106 General Chemistry II - 3 Credits

CHEM 106L General Chemistry II Laboratory - 1 Credit

CHEM 310 Basic Organic Chemistry - 3 Credits **Or**
CHEM 315 Organic Chemistry I - 3 Credits **Or**
CHEM 316 Organic Chemistry II - 3 Credits

ENGL 101 Writing I - 4 Credits

ENGR 101 Introduction to Engineering - 2 Credits

ENGR 102 Computer Aided Design - 2 Credits

ENGR 110 Technical Communications - 4 Credits **Or**
*ENGL 102 Writing II - 4 Credits **Or**
ENGR 106 - 1 Credit And ENGR 108 - 3 Credits

ENGR 11x Exploration Labs (select 2, 1 credit each) - 2 Credits **Or**
ENGR 117 Engineering Foundations II - 2 Credits

ENGR 305 Engineering Statistics - 3 Credits **Or**
ENGR 202

***ENGR 306 Engineering Economics - 2 Credits

***ENGR 395 Engineering Design - 2 Credits

ENGR 480 Senior Capstone Individual Project (2+2) - 4 Credits

MATH 151 Calculus I - 4 Credits

MATH 152 Calculus II - 4 Credits

MATH 253 Calculus III - 4 Credits

MATH 271 Differential Equations - 3 Credits

PHYS 125 Physics I - 4 Credits **Or**
*PHYS 111 - Introductory General Physics I - 4 Credits

PHYS 126 Physics II - 4 Credits

****Program-specific Electives - 6 Credits

Technical Electives - 3 Credits

Additional General Education including WELL xyz and UNIV 101 Common Ground - 14 Credits

Total Credit Hours 136
*These substitutions only apply if completed prior to matriculation at Alfred University.
**MECH 211 and MECH 241 may be substituted for CEMS 251 and 3 technical elective credits.
***ENGR 486 Engineering Operations (4) may be substituted for ENGR 395 (2) and ENGR 306 (2).
****Program-specific Electives: BIOL 302, BIOL 307, BIOL 308, BIOL 402, BIOL 405, BIOL 420, BIOL 422, non-required CEMS 36x or 46x.

Ceramic Engineering (CE)

Ceramics are materials of great diversity; their properties make them useful in a great many applications. Advanced ceramics are ubiquitous in electronic devices (computers, cell phones, tablets), sensors in automobiles, igniters in appliances, tiles on the space shuttle, and cathodes in batteries. Ceramics are also often used in manufacturing other materials and products- refractories that contain molten metals, filters for molten materials, insulators for furnaces, cutting tools, abrasives, and wear-resistant components. In a nutshell, ceramics are some of the oldest and some of the newest materials we use. Many issues that impact energy conservation, recycling, and other environmental concerns can only be solved by the use of ceramics.
Ceramic engineering graduates have a variety of career paths. Many become process engineers, ensuring that manufacturing operations run smoothly and developing improvements that enhance production efficiency and save energy. Others work in technical sales, explaining materials and products, and working with customers to achieve the best match between needs and products. Some are engaged in developing new materials and processes, or in testing materials and components. Of course, some choose to continue their education, earning a Masters or Ph.D., and then going into research and/or teaching. Many ceramic engineering graduates, regardless of their initial path, achieve management positions (supervisors, plant managers, directors of research, etc.), and many end up owning their own companies.

CE Program Objectives

1. The graduates of our Ceramic Engineering program function as engineers in the field of ceramics or material science, serving the ceramic and related industries and academia, with the tools necessary to sustain a long and productive career in the field.
2. The graduates of our Ceramic Engineering program are innovators in the field of ceramic engineering, and related materials fields, and bring their background and hands-on experience to problem solving and the development of efficient and sustainable manufacturing practices.
3. The graduates of our Ceramic Engineering program will be able to design experiments, appropriately treat, evaluate, and interpret data generated in manufacturing processes (such as process control and loss data) or from experimental results, through statistical analysis, data presentation, etc., for the purposes of understanding trends, making predictions, and communicating effectively in the workplace.
4. The graduates of our Ceramic Engineering program bring professional expertise and organizational skills to their careers in industry or academia and relate science and technology to a wide range of technical fields.

CE Degree Requirements and Curriculum

In addition to Alfred University's Fitness and Global Perspective requirements, and the School of Engineering general and seminar requirements, the requirements for the Bachelor of Science in Ceramic Engineering are:

CEMS 203 Introduction to Ceramic Powder Processing - 3 Credits **Or**
CEMS 301

CEMS 214 Structure and Properties of Materials - 3 Credits **Or**
ENGR 204

CEMS 215 Microscopy and Microstructural Characterization - 3 Credits

CEMS 216 Bonding and Structure of Materials - 3 Credits **Or**
CEMS 206

CEMS 235 Thermodynamics of Materials - 4 Credits **Or**
CEMS 204 **Or**
*MECH 320 Thermodynamics I - 3 Credits

CEMS 237 Thermal Processes in Materials - 4 Credits **Or**
CEMS 304

**CEMS 251 Mechanics of Materials - 3 Credits

CEMS 314 Ceramic Processing Principles - 3 Credits

CEMS 317 Sintering - 3 Credits

CEMS 322 Introduction to Glass Science - 3 Credits

CEMS 342 Thermal and Mechanical Properties - 4 Credits

CEMS 344 Properties II: Electrical, Magnetic, and Optical - 4 Credits

CEMS 349 X-ray Characterization - 2 Credits

CHEM 105 General Chemistry I - 3 Credits **Or**
*CHEM 103 Chemistry I - 4 Credits

CHEM 105L General Chemistry I Laboratory - 1 Credit

CHEM 106 General Chemistry II - 3 Credits

CHEM 106L General Chemistry II Laboratory - 1 Credit

ENGL 101 Writing I - 4 Credits

ENGR 101 Introduction to Engineering - 2 Credits

ENGR 102 Computer Aided Design - 2 Credits

ENGR 104 Computer Aided Engineering - 2 Credits

ENGR 110 Technical Communications - 4 Credits **Or**
*ENGL 102 Writing II - 4 Credits **Or**
ENGR 106 - 1 Credit And ENGR 108 - 3 Credits

ENGR 11x Exploration Labs (select 2, 1 credit each) - 2 Credits **Or**
ENGR 117 Engineering Foundations II - 2 Credits

ENGR 220 Circuit Theory I - 4 Credits **Or**
ELEC 223 Electrical Engineering Laboratory for Non-EE - 2 Credits And ELEC 325 Data Acquisition - 2 Credits

ENGR 305 Engineering Statistics - 3 Credits **Or**
ENGR 202

***ENGR 306 Engineering Economics - 2 Credits

***ENGR 395 Engineering Design - 2 Credits

ENGR 480 Senior Capstone Individual Project (2+2) - 4 Credits

MATH 151 Calculus I - 4 Credits

MATH 152 Calculus II - 4 Credits

MATH 253 Calculus III - 4 Credits

MATH 271 Differential Equations - 3 Credits

PHYS 125 Physics I - 4 Credits **Or**
*PHYS 111 - Introductory General Physics I - 4 Credits

PHYS 126 Physics II - 4 Credits

****Program-specific Electives - 6 Credits

Technical Electives - 9 Credits

Additional General Education including WELL xyz and UNIV 101 Common Ground - 14 Credits

Total Credit Hours 133
*These substitutions only apply if completed prior to matriculation at Alfred University.
**MECH 211 and MECH 241 may be substituted for CEMS 251 and 3 technical elective credits.
***ENGR 486 Engineering Operations (4) may be substituted for ENGR 395 (2) and ENGR 306 (2).

****Program-specific Electives: CEMS 311 (1), CEMS 313(10, CEMS 316(3), 318(3), 325(2), 328(3), 352(3), 411(3)/412, 415(3)/414, 438(3), 468(3), 408(3)

Glass Engineering Science (GES)

Glasses have been used for thousands of years in drinking glasses, storage bottles, prized decorative objects, and jewelry. Glasses have these same uses today, but glasses are truly high-technology materials used in optical applications, as sophisticated windows that control light and heat, and in fiber optics that make high-speed, high-capacity voice and data communications possible. Every mobile phone and solar panel has a strengthened glass screen. Glasses are essential components of many medical devices, such as X-ray tubes, endoscopes, and lasers. Advanced testing is being done on using small glass spheres that are injected into the bloodstream to carry radiation or chemotherapy agents directly to the liver to attack cancers.
Most glass products are made from abundant raw materials, such as sand and soda, and glasses are recyclable. In fact, in some countries, glass containers are made using over 90% recycled glass. There are numerous opportunities for new applications for glass, the development of new glasses, and further efficiencies in glass manufacturing. You can't imagine life today without glass.
Glass Engineering Science graduates are highly sought after by the glass industry and by companies that use glasses in processes or products. The Glass Engineering Science program is unique. There simply isn't another program like it in the United States. Graduates can oversee glass production, work on developing new processes and products, test glass products, or work in technical sales. Many choose to continue their education, obtaining a Masters or Ph.D., preparing them for research or teaching at a college or university. With time, and the time may be very short, many will become managers or owners of their own companies.

GES Program Objectives

The program objectives of the Glass Engineering Science Program are as follows:

1. Graduates of the Glass Engineering Science Program will be materials engineers with an in-depth knowledge of the science, engineering and manufacturing of glass. Having acquired the necessary technical and personal skills the graduates will have embarked on a fulfilling career path.
2. Graduates of the Glass Engineering Science Program will have detailed knowledge of glass and related materials, with hands-on experience for problem solving enabling their ability to innovate within their chosen field.
3. Graduates of the Glass Engineering Science Program will be able to design, produce and characterize glass and related materials and use that information to conduct independent research or solve manufacturing problems.
4. Graduates of the Glass Engineering Science Program will operate as ethical and effective professionals and will have the skills necessary to clearly communicate and to function on interdisciplinary teams.

GES Degree Requirements and Curriculum

In addition to Alfred University's Fitness and Global Perspective requirements, and the School of Engineering general and seminar requirements, the requirements for the Bachelor of Science in Glass Engineering Science are:

CEMS 214 Structure and Properties of Materials - 3 Credits **Or**
ENGR 204

CEMS 215 Microscopy and Microstructural Characterization - 3 Credits

CEMS 216 Bonding and Structure of Materials - 3 Credits **Or**
CEMS 206

CEMS 235 Thermodynamics of Materials - 4 Credits **Or**
CEMS 204 **Or**
*MECH 320 Thermodynamics I - 3 Credits

CEMS 237 Thermal Processes in Materials - 4 Credits **Or**
CEMS 304

**CEMS 251 Mechanics of Materials - 3 Credits

CEMS 322 Introduction to Glass Science - 3 Credits

CEMS 325 Glass Laboratory - 2 Credits

CEMS 328 Industrial Glass and Coatings on Glass - 3 Credits

CEMS 342 Thermal and Mechanical Properties - 4 Credits

CEMS 344 Properties II: Electrical, Magnetic, and Optical - 4 Credits

CEMS 347 Spectroscopy - 2 Credits

CEMS 349 X-ray Characterization - 2 Credits

CEMS 423 Mass Transport in Glasses and Melts - 3 Credits

CHEM 105 General Chemistry I - 3 Credits **Or**
*CHEM 103 Chemistry I - 4 Credits

CHEM 105L General Chemistry I Laboratory - 1 Credit

CHEM 106 General Chemistry II - 3 Credits

CHEM 106L General Chemistry II Laboratory - 1 Credit

ENGL 101 Writing I - 4 Credits

ENGR 101 Introduction to Engineering - 2 Credits

ENGR 102 Computer Aided Design - 2 Credits

ENGR 104 Computer Aided Engineering - 2 Credits

ENGR 110 Technical Communications - 4 Credits **Or**
*ENGL 102 Writing II - 4 Credits **Or**
ENGR 106 - 1 Credit And ENGR 108 - 3 Credits

ENGR 11x Exploration Labs (select 2, 1 credit each) - 2 Credits **Or**
ENGR 117 Engineering Foundations II - 2 Credits

ENGR 220 Circuit Theory I - 4 Credits **Or**
ELEC 221 **Or**

ELEC 223 Electrical Engineering Laboratory for Non-EE - 2 Credits And ELEC 325 Data Acquisition - 2 Credits

ENGR 305 Engineering Statistics - 3 Credits **Or**
ENGR 202

***ENGR 306 Engineering Economics - 2 Credits

***ENGR 395 Engineering Design - 2 Credits

ENGR 480 Senior Capstone Individual Project in Glass Science (2+2) - 4 Credits

MATH 151 Calculus I - 4 Credits

MATH 152 Calculus II - 4 Credits

MATH 253 Calculus III - 4 Credits

MATH 271 Differential Equations - 3 Credits

PHYS 125 Physics I - 4 Credits **Or**
*PHYS 111 - Introductory General Physics I - 4 Credits

PHYS 126 Physics II - 4 Credits

Technical Electives - 8 Credits

****Program-specific Electives - 5 Credits

Additional General Education including WELL xyz and UNIV 101 Common Ground - 14 Credits

Total Credit Hours 132
*These substitutions only apply if completed prior to matriculation at Alfred University.
**MECH 211 and MECH 241 may be substituted for CEMS 251 and 3 technical elective credits.
***ENGR 486 Engineering Operations (4) may be substituted for ENGR 395 (2) and ENGR 306 (2).
****Program-specific Electives: any CEMS 32x or CEMS 42x course.

Materials Science and Engineering (MSE)

Advanced materials are critical to nearly every modern technology (electronics, transportation systems, and medical devices). They also play an important role in the solutions to energy and environmental problems we face today. Materials Science and Engineering (MSE) is the broad interdisciplinary field that uses the principles of chemistry, physics, engineering, and biology to develop the improved materials. With an increased focus on nanotechnology, the field is advancing rapidly and will be at the heart of new technologies that we haven't even envisioned.
A materials engineer may specialize in a specific material class (ceramics, metals, polymers) or a specific area of materials science (electrical properties, mechanical properties, processing, testing, etc.), but should possess a broad background in materials science and engineering. Increased emphasis on cost, weight, and size reduction, while still improving product performance, creates challenges for monolithic materials, and opportunities for composites and other new materials. Miniaturization of components frequently is limited by the interactions of dissimilar materials at a microscopic scale. A materials engineer must be able to optimize the overall performance of complex systems involving several materials. In many industries,

several materials may be competing for the same market (e.g., polymer composites versus metallic aircraft structures, and ceramic versus metallic engine components). In these applications, a materials engineer must be able to make an unbiased decision in selecting the best material (or combination of materials), which requires a fundamental understanding of the properties and performance of each of the competing materials. The broad technical base of the Materials Science and Engineering degree prepares graduates for employment in a wide range of industries, including electronics, automotive, and aerospace, as well as for graduate school in engineering and science. Graduates of this program are particularly well suited to work for smaller companies that need materials engineers with a broad background, rather than people specialized in particular fields. Many companies involved in manufacturing require engineers with this broad materials background who can specify materials selection, oversee production, or maintain quality control.

MSE Program Objectives

Graduates of AU's Materials Science and Engineering Program will:

1. Be employed in materials-related industries and will continue to move into positions with both increased technical skill requirements and increased managerial responsibilities.
2. Be engaged in continuing their education and lifelong learning in both technical and non-technical fields including graduate studies in Materials Science and Engineering, and other science and engineering majors; MBA programs; medical school; law school; or short course/workshops applicable to growth within a chosen technical field.
3. Become leaders in the development of their professions including professional society activities, conference presentations, scholarly publications, and student recruiting and mentoring.

MSE Degree Requirements and Curriculum

In addition to Alfred University's Fitness and Global Perspective requirements, and the School of Engineering general and seminar requirements, the requirements for the Bachelor of Science in Materials Science and Engineering are:

CEMS 214 Structure and Properties of Materials - 3 Credits **Or**
ENGR 204

CEMS 215 Microscopy and Microstructural Characterization - 3 Credits

CEMS 216 Bonding and Structure of Materials - 3 Credits **Or**
CEMS 206

CEMS 235 Thermodynamics of Materials - 4 Credits **Or**
CEMS 204 **Or**
*MECH 320 Thermodynamics I - 3 Credits

CEMS 237 Thermal Processes in Materials - 4 Credits **Or**
CEMS 304

**CEMS 251 Mechanics of Materials - 3 Credits

CEMS 314 Ceramic Processing Principles - 3 Credits **Or**
CEMS 316 Chemical Processing in Ceramics - 3 Credits

CEMS 322 Introduction to Glass Science - 3 Credits

CEMS 334 Introduction to Polymers - 3 Credits

CEMS 336 Physical Metallurgy I - 3 Credits

CEMS 342 Thermal and Mechanical Properties - 4 Credits

CEMS 344 Properties II: Electrical, Magnetic, and Optical - 4 Credits

CEMS 347 Spectroscopy - 2 Credits

CEMS 349 X-ray Characterization - 2 Credits

CEMS 446 Mechanics of Composites - 3 Credits

CHEM 105 General Chemistry I - 3 Credits **Or**
*CHEM 103 Chemistry I - 4 Credits

CHEM 105L General Chemistry I Laboratory - 1 Credit

CHEM 106 General Chemistry II - 3 Credits

CHEM 106L General Chemistry II Laboratory - 1 Credit

ENGL 101 Writing I - 4 Credits

ENGR 101 Introduction to Engineering - 2 Credits

ENGR 102 Computer Aided Design - 2 Credits

ENGR 104 Computer Aided Engineering - 2 Credits

ENGR 110 Technical Communications - 4 Credits **Or**
*ENGL 102 Writing II - 4 Credits **Or**
ENGR 106 - 1 Credit And ENGR 108 - 3 Credits

ENGR 11x Exploration Labs (select 2, 1 credit each) - 2 Credits **Or**
ENGR 117 Engineering Foundations II - 2 Credits

ENGR 220 Circuit Theory I - 4 Credits **Or**
ELEC 221 **Or**
ELEC 223 Electrical Engineering Laboratory for Non-EE - 2 Credits And ELEC 325 Data Acquisition - 2 Credits

ENGR 305 Engineering Statistics - 3 Credits **Or**
ENGR 202

***ENGR 306 Engineering Economics - 2 Credits

***ENGR 395 Engineering Design - 2 Credits

ENGR 480 Senior Capstone Individual Project (2+2) - 4 Credits

MATH 151 Calculus I - 4 Credits

MATH 152 Calculus II - 4 Credits

MATH 253 Calculus III - 4 Credits

MATH 271 Differential Equations - 3 Credits

PHYS 125 Physics I - 4 Credits **Or**
*PHYS 111 - Introductory General Physics I - 4 Credits

PHYS 126 Physics II - 4 Credits

Technical Electives - 9 Credits

Additional General Education including WELL xyz and UNIV 101 Common Ground - 14 Credits

Total Credit Hours 132

*These substitutions only apply if completed prior to matriculation at Alfred University.
**MECH 211 and MECH 241 may be substituted for CEMS 251 and 3 technical elective credits.
***ENGR 486 Engineering Operations (4) may be substituted for ENGR 395 (2) and ENGR 306 (2).

Mechanical Engineering (MECH)

Mechanical Engineering is an ideal education for professional entrance into industry, for development of one's own company, or for a variety of opportunities in educational institutions and government agencies. A bachelor's degree in Mechanical Engineering may precede the study of law, business or medicine, and frequently graduate engineering studies. Because the undergraduate training is broad, as well as comprehensive, a mechanical engineer is in demand in practically every type of manufacturing, research and government organization. He/she may be employed in the automotive, aerospace, electrical, chemical, glass, ceramics, solar, petroleum, plastics, or metal-processing industries. The work may involve one or several of the following: design and testing of equipment and systems, supervision of production, sales engineering, plant engineering, research and development, and administration. Some mechanical engineers work in areas not usually considered to require engineering expertise. For example, biomechanical engineers work with physicians to investigate the mechanics of the body and to design instruments and devices for medical purposes. Other mechanical engineers work closely with trainers and athletes, to design sports equipment. Certainly, the professional mechanical engineer has influenced most products and systems we deal with on a regular basis in our lives. Some examples of mechanical engineering applications include:

- Applied Mechanics. Engineers apply mechanics principles to the study, design, and development of systems and components that transmit specified motion, forces, and power that withstand the stresses, strain, fatigue, shock, and vibration within the system itself.
- Controls. With the advent of the microprocessor, on-line data processing and control are incorporated into a variety of manufacturing and processing systems.
- Design. Design engineers combine a working knowledge of materials and components with the complexities and economics of assembling these components into products and systems.
- Energy, Engines and Power Plants. Engineers work with reciprocating and rotating engines utilizing gas combustion or steam pressure to generate power that is transmitted through shaft motion. Engineers make use of solar, wind, geothermal, nuclear and fossil-fuel sources to generate power.
- Fluids. Utilizing the various properties of fluids such as density, viscosity, and compressibility, engineers develop applications with these fluids for new hydraulic control or power transmission devices.
- Lubrication. Engineers try to inhibit the wear on moving parts by choosing or developing a lubricating method that minimizes friction and energy dissipation.

- Heating, Ventilating, and Air-Conditioning (HVAC). HVAC engineers must understand heat transfer, thermodynamics, and control theory to develop energy-efficient systems that control temperature and air quality.
- Materials. Mechanical engineers select, develop, and apply materials for bearings, brakes, clutches, gears, chains, screws, bolts, lubrication, insulation, heat transfer, and so on.
- Pressure Vessels and Piping. Containment structures for solids, liquids and gases are developed to withstand temperatures and pressures, which may vary dynamically.
- Transportation and Aerospace. Engineers in this specialty are engaged in the production or study of the motion of automobiles, trains, ships, planes, missiles, satellites, and rockets. Among their many responsibilities, they may develop improved gasoline or diesel engines, improve automobile power train transmission characteristics, modify the configuration of aircraft structures, or improve solid propellant rocket engines.

MECH Program Objectives

The objectives of the Mechanical Engineering program are as follows:
A few years after graduation,

1. Our graduates will be working in a wide range of industries as mechanical engineers who solve fundamental problems, and effectively communicate their work.
2. Some of our graduates will be working collaboratively in multidisciplinary teams, and move into positions of increased technical skill requirements and managerial responsibilities.
3. Some of our graduates will be pursuing or will have completed advanced degrees in science and engineering, MBA programs, or law school.
4. Some of our graduates will be active participants in their profession, including society activities, scholarly publications, and student mentoring.

MECH Degree Requirements and Curriculum

In addition to Alfred University's Fitness and Global Perspective requirements, and the School of Engineering general and seminar requirements, the requirements for the Bachelor of Science in Mechanical Engineering are:

CEMS 214 Structure and Properties of Materials - 3 Credits **Or**
ENGR 204

CHEM 105 General Chemistry I - 3 Credits **Or**
*CHEM 103 Chemistry I - 4 Credits

CHEM 105L General Chemistry I Laboratory - 1 Credit

CHEM 106 General Chemistry II - 3 Credits

CHEM 106L General Chemistry II Laboratory - 1 Credit

ENGL 101 Writing I - 4 Credits

ENGR 101 Introduction to Engineering - 2 Credits

ENGR 102 Computer Aided Design - 2 Credits

ENGR 104 Computer Aided Engineering - 2 Credits

ENGR 110 Technical Communications - 4 Credits **Or**
*ENGL 102 Writing II - 4 Credits **Or**
ENGR 106 - 1 Credit And ENGR 108 - 3 Credits

ENGR 11x Exploration Labs (select 2, 1 credit each) - 2 Credits **Or**
ENGR 117 Engineering Foundations II - 2 Credits

ENGR 220 Circuit Theory I - 4 Credits **Or**
ELEC 223 Electrical Engineering Laboratory for Non-EE - 2 Credits And ELEC 325 Data Acquisition - 2 Credits

ENGR 305 Engineering Statistics - 3 Credits **Or**
ENGR 202

**ENGR 306 Engineering Economics - 2 Credits

**ENGR 395 Engineering Design - 2 Credits

ENGR 490 Senior Capstone Group Project (2+2) - 4 Credits

MATH 151 Calculus I - 4 Credits

MATH 152 Calculus II - 4 Credits

MATH 253 Calculus III - 4 Credits

MATH 271 Differential Equations - 3 Credits

MATH 371 Linear Algebra - 4 Credits

MECH 211 Statics - 3 Credits

MECH 212 Dynamics - 3 Credits

MECH 241 Mechanics of Materials - 3 Credits

MECH 320 Thermodynamics I - 3 Credits

MECH 321 Thermodynamics II - 3 Credits

MECH 324 Fluid Mechanics I - 3 Credits

MECH 326 Heat Transfer - 3 Credits

MECH 327 Thermal Sciences Laboratory - 2 Credits

MECH 343 Mechanics of Materials Laboratory - 2 Credits

MECH 362 Kinematics and Dynamics of Machinery - 3 Credits

MECH 364 Machine Design I - 3 Credits

MECH 366 Manufacturing - 3 Credits

MECH 417 Introduction to Finite Element Analysis - 3 Credits

PHYS 125 Physics I - 4 Credits **Or**
*PHYS 111 - Introductory General Physics I - 4 Credits

PHYS 126 Physics II - 4 Credits

***Program-specific Electives - 6 Credits

Technical Electives - 3 Credits

Additional General Education including WELL xyz and UNIV 101 Common Ground - 14 Credits

Total Credit Hours 129
*These substitutions only apply if completed prior to matriculation at Alfred University.
**ENGR 486 Engineering Operations (4) may be substituted for ENGR 395 (2) and ENGR 306 (2).
***Program-specific electives: CEMS 336 or CEMS 446, RNEW 468, any non-required MECH 4xy course.

Renewable Energy Engineering (RNEW)

Renewable energy systems is a high growth industry with a need for highly trained engineers who can improve the efficiency of current technologies as well as develop new ways to produce clean and affordable energy.
The Renewable Energy Engineering Program at Alfred University is dedicated to the study and practice of energy systems for a sustainable environment. Our mission is to produce the next generation of engineers and scientists who will develop and perfect renewable energy systems, improve energy efficiency, and advance science and engineering to create a more sustainable future for our planet.
The RNEW program at AU integrates aspects of electrical and mechanical engineering with business in a systems-level approach as it relates to the generation, delivery and consumption of energy from renewable sources. Graduates of our program will work in the energy service industries which specialize in renewable systems. They will work in industry as professionals trained in government regulations. They will assist corporations in improving transmission and grid integration, power markets, utility operation and planning methods, and product management.

RNEW Program Objectives

The objectives of the Renewable Energy Engineering Program are to produce engineers who

1. Advance in a multidisciplinary career within the context of renewable energy in industry, or in advanced postgraduate studies, or in a related field.
2. Actively engage in teams that solve problems with independent thinking with a drive towards excellence in their job/study performance.
3. Adopt the engineering method with their lifelong learning skills and an understanding of complex social issues where renewable energy systems play a key role.

RNEW Degree Requirements and Curriculum

In addition to Alfred University's Fitness and Global Perspective requirements, and the School of Engineering general and seminar requirements, the requirements for the Bachelor of Science in Renewable Energy Engineering are:

CHEM 105 General Chemistry I - 3 Credits **Or**

*CHEM 103 Chemistry I - 4 Credits

CHEM 105L General Chemistry I Laboratory - 1 Credit

CHEM 106 General Chemistry II - 3 Credits

CHEM 106L General Chemistry II Laboratory - 1 Credit

ENGL 101 Writing I - 4 Credits

ENGR 101 Introduction to Engineering - 2 Credits

ENGR 102 Computer Aided Design - 2 Credits

ENGR 104 Computer Aided Engineering - 2 Credits

ENGR 110 Technical Communications - 4 Credits **Or**
*ENGL 102 Writing II - 4 Credits **Or**
ENGR 106 - 1 Credit And ENGR 108 - 3 Credits

ENGR 11x Exploration Labs (select 2, 1 credit each) - 2 Credits **Or**
ENGR 117 Engineering Foundations II - 2 Credits

ENGR 220 Circuit Theory I - 4 Credits **Or**
ELEC 221

ENGR 305 Engineering Statistics - 3 Credits

**ENGR 306 Engineering Economics - 2 Credits

**ENGR 395 Engineering Design - 2 Credits

ENGR 490 Senior Capstone Group Project (2+2) - 4 Credits

MATH 151 Calculus I - 4 Credits

MATH 152 Calculus II - 4 Credits

MATH 253 Calculus III - 4 Credits

MATH 271 Differential Equations - 3 Credits

MECH 212 Dynamics - 3 Credits

MECH 320 Thermodynamics I - 3 Credits

MECH 324 Fluid Mechanics I - 3 Credits

MECH 326 Heat Transfer - 3 Credits

MECH 354 Mechatronics - 3 Credits

MECH 422 Control Systems - 3 Credits

MECH 435 Industrial Control via Microcontroller - 3 Credits

PHYS 125 Physics I - 4 Credits **Or**
*PHYS 111 - Introductory General Physics I - 4 Credits

PHYS 126 Physics II - 4 Credits

RNEW 201 Renewable Energy - 3 Credits

RNEW 255 Power System Operation and Economics - 3 Credits

RNEW 303 Software Engineering - 4 Credits **Or**
ENGR 203 **Or**
CSCI 156 Computer Science I - 4 Credits

RNEW 310 Fuel Cell Principles and Technology - 3 Credits

RNEW 322 Signals and Systems - 3 Credits **Or**
ELEC 322

RNEW 431 Wind Energy - 3 Credits

RNEW 432 Solar Energy Systems - 3 Credits

RNEW 468 Electric Machinery - 3 Credits

Technical Elective - 6 Credits

Additional General Education including WELL xyz and UNIV 101 Common Ground - 14 Credits

Total Credit Hours 132
*These substitutions only apply if completed prior to matriculation at Alfred University.
**ENGR 486 Engineering Operations (4) may be substituted for ENGR 395 (2) and ENGR 306 (2).

Undecided Engineering

Alfred University offers a first-year undecided option for engineering students who want a little more time to select a major. All of the engineering majors, except Biomaterials Engineering, share a common curriculum in the first semester, which includes Calculus I, General Chemistry I, Engineering Foundations I and II, First Year Seminar, Common Ground, and English Composition. In the second semester, undecided students enroll in Calculus II, General Chemistry II, General Physics I, Computer Aided Design, and Technical Communications.

Minors

Minors in the School of Engineering

School of Engineering minors are available to all students pursuing an undergraduate degree at Alfred University, but they are generally most accessible to students majoring in engineering, math, and the physical sciences. Students must meet the prerequisites for the specified courses. An average of “C” or better must be attained in courses submitted for the minor. Note that the Materials Science minor is not available to students majoring in Biomaterials Engineering, Ceramic Engineering, or Glass Engineering Science. There is no minor in Ceramic Engineering.

Biomaterials Engineering (BME)

Requirements for the Biomaterials Minor

- BIOL 211 Cell Biology - 4 Credits
- CEMS 214 Structure and Properties of Materials - 3 Credits **Or**
  ENGR 204
- CEMS 368 Introduction to Bioengineering - 3 Credits
- CEMS 468 Biomedical Materials - 3 Credits **Or**
  CEMS 465 Biocompatibility - 4 Credits
- CHEM 310 Basic Organic Chemistry - 3 Credits **Or**
  CHEM 315 Organic Chemistry I - 3 Credits **Or**

CHEM 316 - Organic Chemistry II - 3 Credits applied

Plus 2 courses from the following list:

- BIOL 302 General Microbiology - 4 Credits
- BIOL 307 Anatomy and Physiology: Nerves, Muscles, Skeleton - 4 Credits
- BIOL 308 Anatomy and Physiology: Viscera - 4 Credits
- BIOL 375 Comparative Vertebrate Anatomy - 4 Credits
- BIOL 376 Animal Physiology - 4 Credits
- BIOL 402 Immunology - 4 Credits
- BIOL 420 Biochemistry: Proteins and Metabolism - 4 Credits
- BIOL 422 Biochemistry: Nucleic Acids - 4 Credits
- CEMS 460
- CEMS 466 Skeletal Tissue - 3 Credits

Minimum total credit hours: 23

Glass Engineering Science (GES)

Requirements for the Glass Science Minor

- CEMS 322 Introduction to Glass Science - 3 Credits
- CEMS 325 Glass Laboratory - 2 Credits
- CEMS 328 Industrial Glass and Coatings on Glass - 3 Credits

Plus at least 6 credits from the following list:

- CEMS 420 Optics and Photonics - 3 Credits
- CEMS 423 Mass Transport in Glasses and Melts - 3 Credits
- CEMS 450 Independent Study (in Glass Science) - 1 to 3 Credits
- ENGR 480 Senior Capstone Individual Project (in Glass Science) - 4 Credits
- COOP 385 Cooperative Education (in Glass Science) - 3 Credits

Minimum total credit hours: 14

Materials Science and Engineering (MSE)

Requirements for the Materials Science Minor

- CEMS 214 Structure and Properties of Materials - 3 Credits **Or**
  ENGR 204
- CEMS 216 Bonding and Structure of Materials - 3 Credits **Or**
  CEMS 206
- CEMS 235 Thermodynamics of Materials - 4 Credits **Or**
  CEMS 204 **Or**
  CHEM 343 Physical Chemistry I - 4 Credits **Or**
  MECH 320 Thermodynamics I - 3 Credits

Plus at least 6 credits from the following list:

- CEMS 237 Thermal Processes in Materials - 4 Credits **Or**
  CEMS 304
- CEMS 3xx Any regularly scheduled CEMS course at 300-level except special topics and independent study
- CEMS 4xx Any regularly scheduled CEMS course at 400-level except special topics and independent study

Minimum total credit hours: 15
Note: The Materials Science Minor is not available to students majoring in Biomaterials Engineering, Ceramic Engineering, or Glass Engineering Science.

Mechanical Engineering (ME)

Requirements for the Mechanical Engineering Minor

- MECH 211 Statics - 3 Credits
- MECH 212 Dynamics - 3 Credits
- MECH 241 Mechanics of Materials - 3 Credits
- MECH 320 Thermodynamics I - 3 Credits **Or**
  CEMS 235 Thermodynamics of Materials - 4 Credits **Or**
  CEMS 204
- MECH 324 Fluid Mechanics I - 3 Credits
- MECH 326 Heat Transfer - 3 Credits
- Choice of 300 or 400-level MECH course - 3 Credits

Minimum total credit hours: 21

Renewable Energy Engineering (RNEW)

Requirements for the Renewable Energy Engineering Minor

- RNEW 201 Renewable Energy - 3 Credits
- MECH 324 Fluid Mechanics I - 3 Credits
- MECH 326 Heat Transfer - 3 Credits

Plus at least 6 credits from the following list:

- CEMS 352 Electroceramics - 3 Credits
- RNEW 310 Fuel Cell Principles and Technology - 3 Credits
- RNEW 431 Wind Energy - 3 Credits
- RNEW 432 Solar Energy Systems - 3 Credits

Minimum total credit hours: 15

Minors in Other Areas of Study

Minors in nearly every other area of study at the University are open to students in the School. Minors in business, mathematics, chemistry, physics, and science policy are very compatible with the degree programs, since some upper-level courses in these

areas can be used as technical electives. A minor in Business is facilitated by the commonality of general education, selection of ECON courses a part of SoE General Education, and use of one of FIN 348 or MGMT 328, both required for a Business minor, as technical electives in all SoE programs. The Business minor can be used as the foundation for an MBA (see the section on MBA and Law Programs).

Special Programs/Options/Opportunities

Cooperative Education (Co-op) and Internships

Undergraduate students have the opportunity to gain experience in a real engineering, research or manufacturing project at a company or national laboratory. Students in the co-op program commonly work during one of their junior year semesters during which they receive 3 academic credits of technical elective and a one-semester waiver of seminar; the sponsor pays a salary and some expenses.
Co-op work sites for students in our program are extensive and are distributed from Maine to California in companies big and small. Quality work experience is considered to be extremely valuable by employers hiring graduates for permanent positions. Many of our students participate in a co-op or an internship (summer employment) in an engineering environment before graduating.

Preparation for the Health Professions

An engineering education provides a strong background for continued study in the health professions, such as medical school. Interested students must choose electives wisely and maintain a high grade point average. Students must take two semesters of biology with a lab (BIOL 211 and 213) and organic chemistry (CHEM 315 and 316). To be properly prepared for the MCATs, there are a number of other biology courses recommended. For more information, visit the pre-professional advising website. Medical schools are interested in students who are aware of current medical trends in our society and who have strong written, oral, and interpersonal skills. Students need to be able to articulate the origin of their interest in medicine and to demonstrate that interest through volunteer/internship experiences in health care facilities/settings.

Participation in Research

The School has roughly $5 million of sponsored research annually. This research has a positive impact on the undergraduate programs in many ways, including providing state-of-the-art equipment, generating new knowledge that gets discussed in classes, and maintaining contacts with industry. Also, many senior thesis projects are done in cooperation with companies or government laboratories. Opportunities for part-time work on funded research projects in the School are numerous. Many undergraduate students are hired for summer research positions in the School, and there are also opportunities for part-time work during the academic year.

Engineering/MBA Program

Students in any of the School of Engineering's undergraduate degree programs who complete the minor in Business Administration also will have completed the foundation courses for the MBA program at Alfred University. These students can obtain an MBA at Alfred in one year of graduate study.

Engineering/Law

Engineering graduates are well prepared for the study of law, including patent law. Students who have an interest in engineering/law should discuss this option with their advisor as early as possible in their program.

University Courses

General Education

COOP 385 - Cooperative Education 3 credit hours. Students are employed off-campus in a position directly related to their academic and career goals. Off-campus arrangements are handled by the Career Development Center. May be repeated one time for credit, but not usually in two consecutive semesters. Prerequisite: Junior standing.

MILS 101 - Foundations of Officership 1 credit hours. (Course and lab) The purpose of this semester is to introduce cadets to fundamental components of service as an officer in the United States Army. These initial lessons form the building blocks of progressive lessons in values, fitness, leadership, and officership. Additionally, the semester addresses "life skills" including fitness, communications theory and practice (written and oral), and interpersonal relationships.

MILS 102 - Basic Leadership 1 credit hours. (Course and lab) This course, available to all students without any military obligation, is designed as a classroom and optional lab course that stresses the fundamentals of leadership. The course goals are to provide students with leadership and managerial skills that will prepare them to lead in public service, business, military and community organizations. This course uses a military model to train leadership development through an introduction to problem solving, effective decision making techniques, and delves into several aspects of communication and leadership theory. The classroom instruction is reinforced throughout the course with practical exercises that focus on individual leadership skills, as well as motivational techniques and how to function as an effective member of a team.

MILS 201 - Individual Leadership Studies 2 credit hours. (Course and lab) Building upon the fundamentals introduced in the MS 1 year, this instruction delves into several aspects of communication and leadership theory. The use of practical exercise is significantly increased and cadets are increasingly required to apply communications and leadership concepts. Virtually the entire semester teaches critical "life skills." The relevance of these life skills to future success in the Army is emphasized throughout the course.

MILS 202 - Leadership & Teamwork 2 credit hours. (Course and Lab) The final semester of the Basic Course focuses principally on officership, providing an extensive examination of the unique purpose, roles and obligations of commissioned officers. It includes a detailed look at the origin of our institutional values and their practical application in decision making and leadership. (Offered Spring)

MILS 301 - Leadership Problem Solving 3 credit hours. (Course and Lab) The MSL 300 level curriculum is intended to build leadership competencies and facilitate the cadet's initial demonstration of individual leadership potential at Leader Development and Assessment Course (LDAC), while also preparing cadets for their future responsibilities as officers. MSL 300 level instruction uses small unit infantry tactics as the context for the development and assessment of leadership. While a measure of technical and tactical understanding of small unit operations is necessary, the focus of instruction in on the leadership competencies. (Offered Fall)

MILS 302 - Leadership and Ethics 3 credit hours. (Course and Lab) The final semester of the MSL III year continues focusing on doctrinal leadership and tactical

operations at the small-unit level. This critical semester synthesizes the various components of training, leadership and team building. The MSL 302 curriculum complements progression through the cadet's campus evaluation process and in the culminating event of the MSL III year in the field training environment of the Leader Development and Assessment Course (LDAC). (Offered Spring)

MILS 401 - Leadership and Management 3 credit hours. (Course and Lab) This semester of the Advanced Course concentrates on leadership, management and ethics, and begins the final transition from cadet to lieutenant. The course focuses cadets, early in the year, on attaining knowledge and proficiency in several critical areas they will need to operate effectively as Army officers. These areas include: Coordinate Activities with Staffs, Counseling Theory and Practice within the "Army Context," Training Management, and Ethics. (Offered Fall)

MILS 402 - Officership 3 credit hours. (Course and Lab) The final semester focuses on completing the transition from cadet to lieutenant. The course starts with a foundation in the legal aspects of decision making and leadership. Following modules reinforce the organization of the Army and introduce how the Army organizes for operations from the tactical to strategic level. Instruction on administrative and logistical management focuses on the fundamentals of soldier and unit level support. The final module focuses on the process of changing duty stations and reporting to a new unit. The Capstone Exercise requires the cadets, both individually and collectively, to apply their knowledge to solve problems and confront situations commonly faced by junior officers. (Offered Spring)

OCST 301 - Cultural Orientation, Reflection and Engagement 2 credit hours. Required for semester- or year-long study abroad participants, this course extends over three semesters: before you go abroad, while abroad, and upon return. It explores the concept of culture, intercultural communication, cultural adjustment and competence, and your host country knowledge.

SJST 115 - Concepts of Service Learning 2 credit hours. This course explores service learning as a way of accomplishing and demonstrating civic engagement through weekly class discussions, reflective writing, and weekly service hours in the local community. Each student selects a service project to satisfy the main requirement of at least 4 hours of service work per week. Service projects vary from term to term. (Cross-listed as UNIV 115)

UNIV 100 - Special Topics 0 to 4 credit hours.

UNIV 101 - Common Ground 1 credit hours. In the spirit of our University's commitment to diversity and inclusion, Common Ground fosters dialogue that encourages students to think critically about their world and listen carefully to each other.

UNIV 102 - Career and Professional Success 1 credit hours. In this course students develop and hone their job search skills. This includes creating and implementing a job search plan, resume and cover letter development, professional etiquette and business protocol, company research, effective networking, "dressing for success," interviewing and salary negotiation, and transitioning from college to the world of work. Students have an opportunity to connect both formally and informally with employers, alumni, and students through dinners, networking receptions, career events, and panel discussions.

UNIV 103 - Dynamics of Student Success 1 credit hours. This course is designed to enhance the university learning experience and prepare students for academic,

personal, and professional success. In addition to analyzing various models of thinking and engaging in self-reflection, students explore skills and strategies to support them in their learning. May be repeated one time for credit (up to a total of 2 credit hours).

UNIV 110 - Drawn to Diversity 2 credit hours. The D2D program uses the CRAFT Model (Contact, Research, Action, Feedback, and Teaching) to produce Community Based-Art, which strives to strengthen a community by providing a creative outlet for all voices to be respectfully shared.

UNIV 115 - Concepts of Service Learning 2 credit hours. This course explores service learning as a way of accomplishing and demonstrating civic engagement through weekly class discussions, reflective writing, and weekly service hours in the local community. Each student selects a service project to satisfy the main requirement of at least 4 hours of service work per week. Service projects vary from term to term. (Cross-listed as SJST 115)

UNIV 200 - Special Topics 1 to 4 credit hours.

UNIV 400 - Special Topics 1 to 4 credit hours.

UNIV 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

VARS 101 - Varsity Sports: Basketball 0 credit hours.

VARS 102 - Varsity Sports: Cross-Country 0 credit hours.

VARS 103 - Varsity Sports: Equest-English 0 credit hours.

VARS 104 - Varsity Sports: Football 0 credit hours.

VARS 105 - Varsity Sports: Golf 0 credit hours.

VARS 106 - Varsity Sports: Lacrosse 0 credit hours.

VARS 107 - Varsity Sports: Skiing 0 credit hours.

VARS 108 - Varsity Sports: Soccer 0 credit hours.

VARS 109 - Varsity Sports: Softball 0 credit hours.

VARS 110 - Varsity Sports: Swimming 0 credit hours.

VARS 111 - Varsity Sports: Tennis 0 credit hours.

VARS 112 - Varsity Sports: Track 0 credit hours.

VARS 113 - Varsity Sports: Volleyball 0 credit hours.

VARS 114 - Varsity Sports: Equest-Western 0 credit hours.

VARS 115 - Varsity Sports: Cheerleading 0 credit hours.

VARS 116 - Varsity Sports: Eques-Dressage 0 credit hours.

WELL 100 - Special Topics 1 to 4 credit hours. Offerings vary year to year depending on the availability of faculty with expertise in a particular health or wellness area.

Honors

HONR 101 - Smash Stuff: SustainMaterials 2 credit hours. The purpose of this course is to educate the student in the fundamentals of the lifelong financial planning process.

This process incorporates six basic areas: investment planning, insurance planning, education planning, tax planning, retirement planning and estate planning.

HONR 102 - Alfred E. Nigmas 2 credit hours. Throughout history, societies have used puzzles for relaxation and encrypting information. More recently, it has been shown that puzzles are an excellent means to flex your brain, to build cognitive ability and maintain mental health as we age. In this course, we study, develop, and solve puzzles of many forms - numerical, alphabetical (words), and mechanical. In addition to focusing on the history and importance of cryptography, ciphers ranging from simple substitution to technologically advanced systems are discussed.

HONR 104 - Quest for Knowledge: Dungeons and Dragons 2 credit hours. Seasoned players, Dungeon Masters, and newbies can join this honorific quest for knowledge. Adventurers in this course will read not-so-ancient scrolls on topics related to the literary roots of Dungeons & Dragons, the societal impact of the game, the “backlash” from parent and religious groups, racism, sexism, the role of magic in society, role-playing and identity, morality, and why no one really likes kobolds. Join weekly quiz-quests for experience points (i.e., grades), play a bit, and create a character sheet based on your analysis of a well-known persona for the final.

HONR 105 - Artificial Intelligence: Fiction and Future 2 credit hours. “Hello. Would you like to be friends?” This question may seem innocent coming from a new roommate, but what if it came from your computer or your car? From Hebrew golems to Ex Machina, people have been both fascinated and terrified of animating the inanimate. Are we ready for technology to become sentient? What if we prefer the virtual world to the real one? Are the fears of Bill Gates and Stephen Hawking justified, or should we look to the hopeful solutions of Larry Page? This course will explore early fascinations with AI and where the future might be headed. Readings will include contemporary science fiction readings like Mindscan and Existence. Students will be expected to lead discussions related to weekly topics and present a project on modern AI.

HONR 107 - Evolution of the DIYer 2 credit hours. About the evolution of “Do It Yourself” projects, the tools and methods utilized to learn these skills, and industries to help the weekend construction warrior. We will survey methods of the past to help appreciate the tools of the present (such as Pinterest, YouTube, and HGTV), and learn how to take on a wide variety of DIY projects. The course will include weekly videos and discussions, along with in-class group activities to learn basic home improvement skills. The class will culminate with a final presentation on how this knowledge might help the students become better-informed homebuyers in the future.

HONR 109 - Crochet: Pattern and Improvisation 2 credit hours. Crochet is not only a tool for creating functional objects: it’s also a great way to model mathematical concepts (like hyperbolic space), improve your ability to move an object from inside your mind to the physical world, and create original works of contemporary art. In this course, students will learn the basics of crochet, and use those skills to create both their own mathematically-driven crochet patterns and improvised or “freestyle” crocheted works of art. Assignments will include working together to make a collaborative crocheted afghan, and creating an original artwork of the student’s own design--2d or 3d, freestyle or highly planned. We will delve into the theory of craft in contemporary art and look at and discuss the work of contemporary artists who use crochet in their practice. No prior experience with crochet (or art!) required.

HONR 111 - Two-Faced: Alter Egos and Other Selves 2 credit hours. In our recent history we have seen a growing interest and exploration of the alter ego: from Jekyll and

Hyde to Beyonce and Sasha Fierce, Superman to Second Life – we have a fascination with tapping into these other selves. This course simply asks the question – why? We will look at the photography of Cindy Sherman and Nikki S. Lee, superhero comics, and the films "Fight Club," "Black Swan" and "Sybil" to investigate these fractured identities and begin to think about our own. The course culminates in a written, visual or performative project, of the student's choice, examining our own relationships with our many selves.

HONR 112 - Star Wars: Myth, Magic & Mania 2 credit hours. The Force awakened in both new and veteran fans this past December with the release of Episode VII, and Star Wars images ubiquitously appeared on everything from toys to coffee creamer. This course examines the seven Star Wars films critically and analytically in terms of contemporary myth and storytelling, archetypes, feminism, racism, politics, merchandising, and its general cult-like influence on American Culture through works of fiction, readings, and footage commentary. Weekly quizzes, arguments, and discussions culminate in a final project examining some aspect of the SW galaxy. NOTE: Students are expected to have watched films prior to the beginning of class.

HONR 113 - Training Methodology: Spartans 2 credit hours. Why does some of the best design, music, art and film come from this tiny, northern European country? Together we examine Swedish folklore, history, politics and language in relation to some of this country's most influential cultural producers, from Ingmar Bergman to Robyn. Through readings, discussion, lectures and videos, you discover what makes Sweden so unique culturally and, as a final project, harness some of this magic by making your own creative work in response.

HONR 114 - Let's Talk About Death 2 credit hours. We're all going to die at some point. How much do you actually know about this whole process? This course is not for the faint of heart – we will compare death on film vs. in reality, view an autopsy, visit a cemetery (maybe a morgue), tell ghost stories, discuss what the dead can provide crime scene investigators, and host a death café. In addition to weekly readings and reflection assignments, students will write a will, plan their own funeral, and present on a death topic of choice.

HONR 116 - Difficult Womxn 2 credit hours. "Hello. Would you like to be friends?" This may seem innocent coming from a new roommate, but what if it came from your computer? From Hebrew golems to 'Ex Machina,' people have been both fascinated and terrified of animating the inanimate. Are we ready for technology to become sentient? Are the fears of Bill Gates and Stephen Hawking justified, or should we look to the hopeful solutions of Larry Page? This course explores early fascination with AI and where the future might be headed. Readings include contemporary science fiction like 'Mindscan' and 'Existence.' Students are expected to lead discussions related to weekly topics and present a project on modern AI.

HONR 120 - From Farm to Table: The Importance of Being Local 2 credit hours. This hands-on Honors seminar will examine how our food reaches us through a mix of classroom presentations, cooking, and numerous field trips to local food producers. The class will offer a delicious introduction to the local food scene in and around Allegany County as well as to a wide variety of kitchen skills. Field trips will include visits to a local vegetable grower, a small organic dairy, meat producers, and a winery. Hands-on labs will include cooking locally available foods, basic food preservation, and an optional unit on butchering. Note: this course will include an additional $20 "lab fee" for supplies, and there may be additional expenses throughout the course for optional activities.

HONR 122 - Culture, Cuisine, Film & Food 2 credit hours. Food offers more sustenance and displays of aesthetics, power, social and economic status, and religious precepts. How is this revealed in different cultures? Viewing, discussing films and preparing, consuming foods from different cultures lead to understanding and discoveries. Vegetarians are encouraged and will be accommodated.

HONR 123 - Muggles, Magic, and Mischief: The Science and Psychology of Harry Potter 2 credit hours. Attention Muggles! Educational Decree #1836 mandates a course be offered entitled "Muggles, Magic, and Mischief." Rowling's world of witchcraft and wizardry provides a window into the human psyche and the mysteries of science. Students and their housemates will examine the human and wizarding world through weekly quizzes and one final presentation on topics related to: the universal appeal of magic; Quidditch as a sport; invisibility, travel through time and by floo; the unnatural biology of magical creatures; teenage angst, friendships, and romance; the nature of evil; and potions. (NOTE: All seven books should be read before start of term).

HONR 124 - T'ai Chi: A Way of Life 2 credit hours. T'ai Chi is a way of life that has been practiced by the Chinese for many centuries. This meditative, peaceful "martial art", is known and regularly practiced daily by millions of people throughout the world. This course intends to have dual emphases. Academically, students will be introduced to T'ai Chi's early history and its evolution into the contemporary era. To this end, we will explore T'ai Chi's philosophical background as it links with Chinese culture, with occasional comparisons and contrasts to Western thought. Readings will provide additional stimuli for class discussions, which will include what is meant by the energy "Chi" and the internal power of "Jing". Students will also learn approximately half of the 64 movements of the form and the physical/mental/meditative preparation required for proper learning. Proper practice will provide the student with a balanced mind, spirit, and body!

HONR 129 - Soft Core: An Introduction to Textile Arts 2 credit hours. Have you ever wanted to make your own silk scarf, create a hand-woven wall hanging or enhance your clothes with embroidery? Get ready to give your fingers a workout. In this course we work with batik and other silk painting techniques, construct hand looms for weaving experiments, explore basic embroidery stitches for artworks and wearables, and look at historical and contemporary fiber artists for reference and inspiration. A student project is required. There is a fee to cover the costs of materials.

HONR 131 - Drinking up: The Science and History of Alcohol 2 credit hours. Medicinally, as a source of nutrients, in worship and religion, and as a social lubricant, alcohol (ethanol) has been used by people from the earliest times to present. It was likely a fortuitous accident tens of thousands of years ago that it came into human culture, and while abused by a minority of drinkers, most derive pleasure from its consumption. In this course, the history and science of ethanol will be examined. A combination of laboratory exercises and lectures will comprise this course; and may include but not be limited to "crafting a homebrew," analysis of beer/wine/spirits, field trips to vineyards and invited speaker visits. Students will be expected to prepare short projects about a beer, a wine, and a distilled spirit; as well as briefly present on one of them in this course.

HONR 132 - Wanderlust 2 credit hours. Experience walking as a method of investigating people, place, concept, and the environment. In this course we explore the history of walking, walking art works, and the rural and urban environment. There are readings/viewings/research about walking, walking assignments each week,

and experiential walking projects created by the students. No specific experience is necessary. We explore walking through your chosen lens of interest - science, history, art, environmental studies, architecture, engineering etc. Walking shoes and warm clothes required.

HONR 134 - True Crime 2 credit hours. Jack the Ripper. Lizzie Borden. The Lindbergh baby. O.J. Simpson. These and other true crime stories gripped the public imagination and permanently changed popular culture-- but why? This seminar will examine some of history's most famous crimes, questioning how gender, class, race, and other factors affect how certain crimes impact our consciousness while others fade away. Students present on a famous true crime case, and in their final projects create a film, essay, or independent investigation on a true crime that isn't famous, but should be.

HONR 136 - Fashion and Print: What Are They Wearing? 2 credit hours. Explore recent history of printed clothing through social media and popular culture. Get a hands on approach in all aspects of designing, printing, and wearing your own screen printed creations. We discuss color theory, practical design elements, Photoshop, and of course all the current trends shaping what is commercially sold in stores. A final critique of your 'mini collections' in the form of a gallery opening will showcase your talents. A lab fee is required to cover some materials.

HONR 140 - Spirituality and Art 2 credit hours. The main objective of this course is to explore the topic of spirituality as part of a creative practice. We begin with an exploration of artists touching on spirituality in their practice. Readings on Mariko Mori, Yoko Ono and John Cage will launch the weekly class discussions. The direction of the course will be student led. Possible additions for the class could include meditations, an introduction to sound healing and energy work; or intuition development as a creative tool. Assignments include a journal and smaller interim visual or written projects, which will lead to a final project.

HONR 141 - Wonder Woman: Window into Pop Culture, Women's Issues, & Child Psychology 2 credit hours. Created in 1941, Wonder Woman is the oldest and most popular female comic book hero. While well-ingrained in society today, her character and comic books in general created national backlash and tension in their early years.Using the book "The Secret History of Wonder Woman" by Jill LePore, this class explores the interwoven topics of women's rights, pop culture, comic books, and child psychology during the mid-20th century. Discussion, guest lecturers, readings, films, and primary sources of the day additionally help illustrate and expand upon the issues.

HONR 142 - Jobs and the Environment 2 credit hours. The class explores the ability of the United States to balance job creation against damage to the environment. Scott Pruitt, new head of the Environmental Protection Agency [EPA], stated in his first meeting with EPA employees that there should not be a contradiction between environmental protection and job creation. We explore through the media how the EPA is walking this fine line. Class projects and classroom discussions will examine the expected expanded role for fossil fuels in power generation and the resulting impact on the environment.

HONR 143 - The Pharmaceutical Industry 2 credit hours. How are drugs discovered? How are their safeties determined? How much does it cost? Who pays for it? Why do medicines cost so much? Have you ever asked yourself any of these questions? Perhaps only rivaled by the political system, the pharmaceutical industry is one of the most critically considered industries and enterprises in society today. But is that

image deserved? All these questions and more will be answered as we discuss the pharmaceutical industry and drug development. The good, the bad, and the ugly of this necessary industry are covered. No prior experience in a science class is necessary. Student work includes participation in class discussions and a term paper and presentation on a pharmaceutical compound of the student's choosing.

HONR 145 - A Dark and Stormy Night 2 credit hours. Become a published writer! In this seminar, we'll survey 180 years of haunting tales. We'll read stories about haunted houses, haunted objects, and haunted minds. Each student will then write an original ghost story, and the seminar will culminate with the design, editing, and publication of an anthology of those stories.

HONR 147 - This Course Sucks: A Vampire Extravaganza 2 credit hours. As the sun sets, we'll study vampires in fiction, television, and film. We'll explore where these stories originated, how they've evolved over the centuries, and why they remain popular today. What fantasies and fears have kept these stories alive into the 21st century? From Le Fanu's 1874 Carmilla to popular television shows including True Blood and What We Do in the Shadows, we'll explore a broad range of topics including class, race, sexuality, disease, and mythology. Each seminar member will create a final vampire-themed project that can be creative, scholarly, or both. Donating blood is highly encouraged but not required.

HONR 149 - The Aliens Did It? 2 credit hours. There are theories that this planet has been visited by aliens for millennia and that these visitors have influenced the course of human history. Although some theories are somewhat thought-provoking, there have come allegations that some of the proponents of these theories have fabricated evidence and that some have willfully ignored reliable evidence contrary to their theory. In this course, we discuss select theories and their merit. In particular, we discuss cases where misconduct has been alleged and use this to initiate a discussion on scientific misconduct/ethics. Students present one theory of their choosing as an oral presentation and write a paper on another theory of their choosing.

HONR 150 - Bad Words 2 credit hours. What's the worst you can say or think? No matter which "bad words" come to mind, it's more complicated than that – and more interesting. Taboo? Obscene? To whom and why? This course examines social layers of offensive language and gestures, changing meanings and functions over time with examples ranging from literature to popular culture, as well as differences across cultures. Suspending judgment and discomfort with certain words frees us to think critically about a fascinating topic. Students will write two reflective essays and one on a researched topic; they will also give a class presentation.

HONR 154 - From The Clash to Kendrick: The Art of Protest Music 2 credit hours. The English punk band The Clash put it this way: "Let fury have the hour/Anger can be power/If you know that you can use it." In this seminar we will explore music that attempts to put anger to use. We will look at specific political firestorms – e.g., the "troubles" in Northern Ireland and the AIDS crisis – as touchstones for artists who felt compelled to create in the face of injustice, rage, and confusion in the punk movement. We will then trace the rise of hip-hop as informed by a strong tradition of protest, culminating in hip-hop music of the Trump era. Ultimately, we will ask: what makes good political music? can political art be good art? what happens when revolutionary culture is co-opted, packaged and sold? We will create and DJ a radio show to be broadcast on WALF exploring the music of protest from the 1970s to today. Punk and post-punk artists may include: The Clash, Gang of Four, Minor Threat, Patti Smith, Wire,

and Fugazi. Hip-hop artists and albums we will listen to are: KRS-One/Boogie Down Productions, Public Enemy, NWA's Straight Outta Compton, Killer Mike, Dead Prez, Kendrick Lamar's Damn., and Beyoncé's performance film Homecoming. Additions as suggested by the class are more than welcome!

HONR 155 - Cut-Bend-Fold-Bind 2 credit hours. Exploring paper, fabrics, and pigments, this course dives into different techniques of making hand and machine-bound books. A wide variety of stitches will be explored, as well as some advances in technology with the use of the digital glue binder and fabric printer. Assignments involve physical book creation/design, discussion/critique, and cumulate in a pop-up exhibition. Exploration and discussion of artists' and rare books in the Scholes Library will be used as inspiration.

HONR 158 - Personal Financial Planning 2 credit hours. The purpose of this course is to introduce honors students to the fundamentals of personal financial management in a more creative, interactive and dynamic manner that is used in the regular class. The class includes subject area experts sharing knowledge, a stock investing competition with a $50 cash prize for the winner, and hands-on exercises. Our focus is on wealth accumulation, paying off student loans, investment planning, insurance planning, retirement planning and estate planning. At the conclusion of the course, each student develops their individual financial plan personalized for their unique circumstances.

HONR 159 - Monsters, from Folklore to Reality 2 credit hours. In this course, we examine the influence of religion, culture, and science on monsters throughout history. We also look at how we respond to the presence of monsters, whether in the form of actual large predators (e.g., sharks) or other frighteningly powerful creatures stemming from folklore or reality. Current controversial monster-related topics such as genetic engineering, artificial intelligence (The Terminator) and invasive species will be analyzed, using movies (Jaws, Outbreak, Frankenstein), television (Bigfoot, River Monsters, The Walking Dead, The Following), and books ("Monster of God," "Medusa's Gaze" and "Vampire's Bite: The Science of Monsters"). We'll also focus on the scariest monsters in today's society---HUMANS.

HONR 162 - The Science of Baking 2 credit hours. We look at how bread, cake, and pastry are so different despite being made of the same basic ingredients. In the same way that chemicals are made of different combinations of elements, we can create an endless number of delicious treats with just a few things in different ratios and mixed in different ways. Class time is entirely devoted to baking different things, so you can get hands-on experience. There will be some short papers reflecting on each topic and a final project where you invent a recipe and bake it for the class.

HONR 163 - Bodies: Trained, Perceived, Experienced 2 credit hours. Pop-culture shapes perceptions and experiences of the human body. This class looks at popular ways of training, portraying, and understanding the body in the 20th and early-21st centuries including: physical culture and fitness, advertising and mainstream medical science. Through a theoretical and embodied survey of these worlds, students learn about how popular Western thought on bodies and movement influences perceptions of the body—what it can do and how we experience physicality.

HONR 165 - Data Structures and Algorithms Using Python 2 credit hours. As artificial intelligence and automation transform industries, demand for data-savvy employees is far outstripping the available supply. This course introduces beginning students to data structures and algorithms using Python, one of the most widely used programming language in computing. It allows students to focus on problem-solving

skills and algorithm development. The primary activities include lectures, discussions, and labs. By the end of the course, students will be able to use Python to manipulate data and run basic data analyses.

HONR 171 - The Psychology of Heavy Metal and Punk Rock 2 credit hours. Black Sabbath and The Sex Pistols made Elvis and the Beatles seem quaint; Marilyn Manson and Bad Religion could outsmart Miley and Bieber six ways from Sunday. To what cultural, social, and psychological (or psychotropic) events are the “heaviest” of the musical genres responding? Must social distortion be loud? Has that disruptive vision been diluted? What should a rebellion sound like today? This course combines an exploration of harder-edged music genres with analysis of the psychological underpinnings of their artists and fans. Students will be exposed to a variety of relevant genres and will introduce new artists to the class each week via scheduled presentations. Psychological theorists, such as Jung, Freud, and Adler, will play a prominent role in discussions about the appeal of said genres, the sense of community developed by their devotees, and the alleged role of heavy music in violence and mental illness. Students will also construct a personal music profile, a multimedia work detailing their genre and artist preferences and their personal/psychological origins.

HONR 172 - Maple Syrup: The Real Thing 2 credit hours. Wanted: Someone with a background in meteorology, chemistry, botany, forestry, art, and cookery who is also a nature lover with lots of patience. Must enjoy long hours of hard work in the snow, cold, and mud. Even though this is an accurate description of a maple syrup producer, don’t let it scare you! The method of producing maple syrup is one of the things in our society that has endured even in today's culture of constant change; fundamentally it’s the same process Native Americans used centuries ago. The study of maple syrup is also a way to investigate a variety of disciplines. This class allows for an introduction and discussion of them as well as cooking with maple syrup. Additionally, field trips to local producers, restaurants, and festivals helps students explore the local community.

HONR 173 - Dreams, Dreams, Dreams 2 credit hours. What are dreams all about? Are they really meaningful, interpretable stories that are relevant to our lives or simply irrelevant neuron-firings that amount to unintelligible gibberish? What is the value of examining one’s dreams closely? What is the function of dreams for the human organism? We will explore these questions and plunge into the world of dreams in this seminar. Students will be asked to study their dreams by keeping a dream journal. Dream dictionaries, outlandish theories, and poorly conceived beliefs about dreams will be trashed, debunked, and abandoned.

HONR 176 - Cult(ure) 2 credit hours. This course delves deep into the world of cults. By examining famous cults in recent history, we begin to unravel the cultural, political and social contexts that have allowed for these fanatic new religious movements to thrive. Apocalyptic end times, civil rights, psychedelics, sexual deviancy, megalomania, symbolism, art, fashion, music, film - these are just a few topics we cover over the course of the semester through lectures, films, readings and projects. For the final project each student defines and develop their own individualized cult with a focus on a written manifesto, ritual and cult fashion.

HONR 178 - American Gangster 2 credit hours. In this course we ask: is the gangster in pop culture only an "honest" portrayal of the capitalist values that drive our society? Does the gangster genre indulge our desire for a life lived by codes of honor and loyalty, or are these facades hiding darker truths? We watch classics in the genre like Little Caesar, Scarface, and Public Enemy and then compare these films with more

modern classics like The Godfather, GoodFellas, and The Sopranos. We consider appropriations of pop culture imagery of “La Costa Nostra” in the rap albums “Only Built 4 Cuban Linx” by Raekwon and Ghostface of the Wu Tang Clan and “American Gangster” by Jay-Z. Projects include a series of group presentations on the changes in the representation of the gangster in film and music over the years and what these changes have to tell us about American society.

HONR 179 - As Gaeilge: Irish and Irishness 2 credit hours. Forget your stereotypes. This course delves into contemporary Irish culture in and from Ireland. Film, food, theater, art, dance, music, sport, perhaps some history and definitely an introduction to conversational Irish language (Gaeilge)- these are just a few of the topics we cover over the course of the semester. Coursework features hands-on workshops, readings, films, class discussions, individual and group projects as well as a possible field trip.

HONR 181 - Too Gouda To Be True 2 credit hours. Soft and drippy triple cream brie, or a hard and pungent gruyere? Sample a weekly cheese while learning about its origin, production, and suggested serving. Students present on their preferred cheese to the group, allowing for discussion, analysis, and investigation of taste, texture, and smell. The semester culminates in the class’s production of a digitally bound, laser-cut, Swiss cheese triangular book - graphing, scoring, and mapping the multitude of sampled cheeses. Purchase of ONE cheese required per student to share and a $15 lab fee to cover accompanying snacks, beverages, and book production.

HONR 183 - Can We Weather the Weather? 2 credit hours. Take a look at some of the most devastating weather events, both past and present, and discuss observable trends, debate major policies, issues, and potential climate change factors, and ponder the ultimate question: Can we weather the weather of the future? This course will include weekly readings which will lead into weekly videos and discussions, and students will be asked to prepare one final presentation summarizing their climate views, whether or not their views have changed throughout the course, and how they believe the planet should proceed going forward.

HONR 184 - The Psychedelic Experience 2 credit hours. This course will look at psychedelic culture in the US from the 1950s to present day. Through firsthand accounts, documentary footage, podcasts, films, art and music, we will examine our complicated history with psychedelics and how attitudes towards them have been shifting with new research into their therapeutic potential. Material covered will include: Albert Hoffman + LSD; The Harvard Psychedelic Project; Acid Tests; Terence McKenna; The Multidisciplinary Association for Psychedelic Studies; Michael Pollan’s How to Change Your Mind; and much more. Students will be asked to give a presentation on a relevant topic and create a final project.

HONR 185 - Misconduct in Research and Science: Falsifiers, Filchers, and Genetic Frankensteins 2 credit hours. After an introduction on how research is done, we analyze and debate contemporary and historical cases of scientific/research fraud and priority disputes. In addition, cases of controversial research topics including weapons research, genetic modifications, and others are considered. Through these lenses, you develop the skills to identify questionable and fraudulent research practices such as falsification, fabrication, and plagiarism and also hone the decision-making skills necessary to take an informed stance on controversial topics and how they can be explored while minimizing risks. You will author one paper on a fraudulent research case and lead one class discussion on a controversial case. If time permits, we will also hold a mock trial of a priority dispute.

HONR 188 - CAMP 2 credit hours. In CAMP, we want to go beyond marginal self-presentation to explore the expressions and the experiences of an “aesthetic of artifice,” in fashion, films, life, music, novels, and theater internationally. As seen at the Met’s Costume Institute and Gala 2019, camp is a social practice of ostentation and theatricality that celebrates exaggerated performance. We will immerse ourselves in thirteen unique examples of camp. Students will design a project that embraces camp’s “love of the unnatural” as explained by Susan Sontag. Can you take CAMP far enough?

HONR 189 - Laughter Crafters: Political Cartoons & Memes 2020 2 credit hours. With the November 2020 elections looming, our challenge will be to analyze and learn about issues facing the country through the lens of editorial cartoons. We'll host a "presidential debate" through contrasting cartoons and memes, we'll mount cartoon face-offs on controversial issues such as immigration, climate change, and gun control, and we'll draw our own editorial cartoons (no artistic ability required!). We'll explore current events through regular small group cartoon-based quizzes, and student teams will produce poster presentations on the major historical event of their choice.

HONR 197 - Do Not Pass Go and Do Not Collect $200: What We Can Learn Through Board Games 2 credit hours. In this class, we will see how to use board games as a pedagogical tool. Each class will be centered about a subject (history, economics, natural sciences, social justice, morality and ethics, among others). The students will play a game in class whose theme matches the corresponding subject. They will be asked to write a short reflection about the board game that they played and its theme. As a final project, students will choose a topic and a board game, then develop supporting materials (such as brochures, reference cards, images, audio, questionnaires, etc.) that could be used in a classroom setting to teach the chosen topic.

HONR 450 - Independent Study 1 to 4 credit hours.

HONR 480 - Senior Thesis 2 credit hours.

Physical Education

PFIT 100 - Special Topics 1 credit hours. Offerings vary year to year depending on the availability of faculty with expertise in the particular physical fitness activity.

PFIT 101 - Cross Training 1 credit hours. Combined weight training exercises and cardiovascular activities designed to improve strength, flexibility, cardiorespiratory fitness, and body composition.

PFIT 103 - Cardiovascular Fitness 1 credit hours. An exposure to a variety of aerobic activities with emphasis on improved cardiovascular fitness and knowledge of scientific principles needed to attain an improved level of cardiovascular fitness.

PFIT 105 - Beginning Badminton 1 credit hours. In this course, the emphasis on the effective use of the racquet, court coverage and position play, strategy, rules, and historical background. Students participate in singles and doubles games. Class tournaments are arranged.

PFIT 108 - Introduction to Yoga 1 credit hours. Derived from the Sanskrit word yuj, "yoga" means "union". To practice yoga is to reunite body, mind, and spirit. The focus of this course is the first of the Three Stages of Kripalu Yoga practice. Stage One introduces yoga postures (asanas) and breathing techniques (pranayama). Special

attention is given to safety, alignment, and the coordination of breath and movement. The only prerequisite is a commitment to develop a daily practice.

PFIT 110 - Downhill Skiing 1 credit hours. This course offered downhill skiing for beginners to advanced. Instruction is provided by Swain Ski Resort. Students are grouped according to ability level for lessons. A fee is assessed to cover the cost of skiing and transportation to and from the Swain Ski Resort.

PFIT 112 - Beginning Golf 1 credit hours. The basic fundamentals of swing, grip and putting are introduced. There is opportunity for practical application indoors followed by several experiences at a golf course. The rules and etiquette of the game fully covered.

PFIT 113 - Snowboarding 1 credit hours. This course offered snowboarding class for beginners to advanced. Instruction is provided by Swain Ski Resort. Students are grouped according to ability level for lessons. A fee is assessed to cover the cost of skiing and transportation to and from the Swain Ski Resort.

PFIT 115 - Total Fitness 1 credit hours. Through lecture and participation in a specific and progressive exercise program, students experience what total fitness is, why it is important to establish life-long skills, and how to safely and effectively increase their levels of fitness.

PFIT 118 - Weight Training 1 credit hours. Student take a scientific look at several types of weight training programs and select one, based on individual needs, to be used throughout the semester.

PFIT 125 - Karate 1 credit hours. Physical conditioning and discipline through experiencing offensive and defensive karate techniques. Students become familiar with common self-defense maneuvers and are introduced to the Kata (formal exercises of martial arts). Included are martial arts history, tradition and etiquette.

PFIT 129 - Beginning/Intermediate Swimming 1 credit hours. Students are exposed the to the basic strokes with emphasis on achieving confidence in the water, and have an opportunity to perfect strokes and increase endurance.

PFIT 130 - Advanced Swimming 1 credit hours. Advanced strokes and swimming skills are presented along with some racing and diving techniques. Prerequisite: PFIT 129 or permission of instructor.

PFIT 131 - Lifeguard Training 1 credit hours. This is an American Red Cross course providing the necessary minimum skills and knowledge needed to qualify and serve as a non-surf lifeguard. Not intended to be a complete lifeguard training program. Prerequisite: PFIT 130 or passing qualifying test.

PFIT 133 - Basic Tennis 1 credit hours. This course includes a group presentation of basic strokes, simple strategy and rules, and provides beginners with early opportunities for singles and doubles play. Students are screened by the instructor to determine beginner's status.

WELL 101 - Foundations of Wellness 2 credit hours. Wellness is a journey into personal transformation; the integration of body, mind, and spirit. Topics covered in this course include enhancing self-actualization, self-responsibility, peace of mind, attitude change, and balance at several experiential levels. Exploration in each of these separate realms examines physical, mental, emotional, social, environmental, and spiritual life enhancing techniques. (Offered every term)

College of Liberal Arts and Sciences Courses

Biology

BCHM 300 - Topics in Biochemistry 1 to 4 credit hours.

BCHM 320 - Toxicology 4 credit hours. This course explores the effects of chemicals (pollutants, pharmaceutical agents, etc.) on biological systems at the organismal level with emphasis on the effects of chemical exposure on human health. Topics include general principles of toxicology; the dose-response relationship; absorption, distribution, metabolism, and excretion; non-organ directed toxicity; target organ toxicity; risk assessment.

BCHM 420 - Biochem: Proteins & Metabolism 4 credit hours. Properties, biosynthetic pathways, and metabolism of carbohydrates, lipids, and nitrogenous compounds with related units on physical biochemistry, protein structure, bioenergetics and enzyme kinetics. Laboratories reinforce theoretical concepts and provide hands-on experience with modern biochemistry techniques and instrumentation. Three lectures and one three-hour laboratory.

BIOL 101 - General Biology I 4 credit hours. This course is an introduction to the fundamentals of biological organization at the cellular level. Topics include the chemical basis of life, cell structure and function, and genetics. Three lecture/discussions and one two-hour laboratory. This course is offered as a dual credit course at Wellsville High School.

BIOL 102 - General Biology II 4 credit hours. A continuation of BIOL 101, this course is an introduction to the fundamentals of biological organization and processes with an emphasis on diversity of organisms, the variety of ways they have adapted to meet the requirements for living, and how they interact with their environment and other organisms. Three lecture/discussions and one two-hour laboratory. This course is offered as a dual credit course at Wellsville High School.

BIOL 105 - Science of Nutrition 4 credit hours. By looking at the science behind nutrition, we answer the questions "Are we really what we eat? And how do we know what is in our food?" Incorporating basic biology, chemistry, and physics, we investigate the components of food, consider how these are processed by the body, and the importance of nutrition to growth, health, and disease.

BIOL 106 - Field Botany 4 credit hours. Introduction to the taxonomy and adaptations of native and introduced plants in western New York ecosystems. Students will learn identification of species through laboratory and field studies. Biodiversity of natural ecosystems will be investigated and compared. Biology majors may receive Biology elective credit by fulfilling additional requirements.

BIOL 107 - Human Anatomy and Physiology I 4 credit hours. This course examines the bases of the human body in health and disease. Dissection of the cat and other mammalian organs, and a series of physiology exercises investigate structure and function from cell to organ system of the integumentary, skeleto muscular, nervous-sensory and endocrine systems. Three lecture/discussions and one three-hour laboratory. This course is offered as part of the BOCES New Visions Medical program.

BIOL 119 - Physiology of Aging 4 credit hours. Examines both the expected changes in normal human aging as well as the pathologies of the aging process. Topics covered include digestive, cardiovascular, sensory, hormonal, musculoskeletal and urogenital systems as well as cellular metabolism and drug absorption. Required of Gerontology majors. Four lectures. (Alternate years)

BIOL 120 - Gut Instinct: An Introduction to Microbes 4 credit hours. This course will introduce you to the hidden microbial world, with an emphasis on bacteria and viruses and the relationship they have with humans. The following topics are covered: microbial structure, physiology, ecology, metabolism, infectious disease, food microbiology, and gut-microbe interactions that affect human health. (Offered: Summer Term/Allen Term)

BIOL 130 - Introduction to Human Genetics 4 credit hours. A look at human genetics from the human genome project and biotechnology to inheritance of traits. Emphasis will be placed on understanding current and past discoveries in genetics, how those discoveries may impact our lives, and what they mean for the non-scientist. Class will meet for 3 lectures and one two-hour lab per week.

BIOL 131 - The Basics of Cancer Biology 4 credit hours. This course is designed for a broad spectrum of students from different academic backgrounds and interests, who would like to learn more about cancer, its biology, mechanisms of action, therapeutics, ethical aspects of chemotherapeutics treatments and alternative approaches to malignances. Students learn how to communicate scientific basics of cancer etiology to society and their community members in an approachable language.

BIOL 150 - Biological Foundations 4 credit hours. This course introduces both biology majors and non-majors to the core concepts of biological literacy (evolution, structure and function, genetics and information flow, metabolism and energy, and living systems) and the competencies that underlie the disciplinary practice of Biology.

BIOL 155 - Biological Foundations: Research Project 4 credit hours. This course is designed for entering biology majors who have had a strong biology course prior to matriculation at Alfred, and who thrive in a non-traditional course environment. In addition to a solid foundation in Biological core concepts, students conduct authentic (novel) research. Registration is by permission. Contact the chair of the Biology Division if you are interested in applying for enrollment in this course.

BIOL 207 - Introduction to Anatomy and Physiology I 4 credit hours. Introduction to the structure and function of the human body focusing on general biology, chemistry, and physics by exploring the integumentary, skeletal, muscular, and nervous systems. (This course meets NYSED certification knowledge in scientific concepts). Three lectures and a laboratory.

BIOL 208 - Introduction to Anatomy and Physiology II 4 credit hours. Introduction to the structure and function of the human body focusing on the cardiovascular, respiratory, digestive, lymphatic, and reproductive systems, with special attention given to nutrition. Three lectures and a laboratory. Prerequisite: BIOL 207 or instructor permission.

BIOL 211 - Cell Biology 4 credit hours. The first course in a core sequence for biology majors, this course focuses on the molecular foundations of life, enzymology, metabolism, and cell ultrastructure, organization and function. Laboratory focuses on basic techniques including microscopy, micropipetting and the use of model organisms. C or better in BIOL 150 and in CHEM 105, CHEM 106 is recommended as a pre- or co-requisite.

BIOL 212 - Principles of Genetics 4 credit hours. Students who complete this course will have a fundamental knowledge of the principles of transmission, molecular and population genetics. Application of concepts through investigative laboratories. A required core course for biology majors. Three lectures and one three-hour laboratory per week. Prerequisite: 'C' or better in BIOL 211. Pre- or Co-requisite CHEM 106.

BIOL 213 - Structure and Function of Organisms 4 credit hours. Using one or more model systems (e.g. humans, plants), students will be able to explain structure-function relationships; how form follows function in animals and plants. Application of concepts through investigative laboratories. A required core course for biology majors. Three lectures and one two-hour laboratory per week. Prerequisite: 'C' or better in BIOL 211.

BIOL 226 - Biostatistics 4 credit hours. Application of statistics to experimental design, data analysis, and decision making in the biological sciences. Prerequisite: BIOL 211 as Pre- or Co-requisite.

BIOL 300 - Topics in Biology 1 to 4 credit hours. This course provides opportunities for examining areas not covered in the regular offerings. Topics vary each semester.

BIOL 302 - General Microbiology 4 credit hours. This course surveys the microbial world, with an emphasis on bacteria and viruses. The student will gain an understanding of how the study of microorganisms has paved the way for important advances in human health, agriculture, and food science. Major topic areas include structure/ function, metabolism, genetics, biotechnology, and host-parasite relationships. The laboratory offers experience in aseptic handling of bacterial cultures as well as applications of classical and modern techniques for microbial identification and characterization. Three lectures and one three-hour laboratory. Prerequisite: BIOL 211 and (CHEM 310 or 315).

BIOL 306 - Human Pathophysiology 4 credit hours. The course explores major human disease in the hematopoietic, cardiovascular, respiratory, reproductive, and gastrointestinal systems. Emphasis on the etiology, the alterations in physiological, cellular, and biochemical processes, the associated homeostatic responses, and the manifestations of disease.

BIOL 307 - Anatomy and Physiology: Nerves, Muscles, Skeleton 4 credit hours. This course examines the bases of the human body in health and disease. Using dissections of mammalian specimens, students investigate structure and function from cell to organ system of the integument, skeletal-muscular, and nervous-sensory systems. Three lectures and one two-hour laboratory per week. This course is part of the Anatomy and Physiology series. Prerequisite: BIOL 211.

BIOL 308 - Anatomy and Physiology: Viscera 4 credit hours. This course examines the bases of the human body in health and disease with a focus on 'internal' organ systems, including the circulatory, lymphatic, respiratory, urinary, and reproductive systems. Students engage in dissections of mammalian specimens. Three lectures and one two-hour laboratory per week. This course is part of the Anatomy and Physiology series. Prerequisite: BIOL 307.

BIOL 314 - Community and Systems Biology 4 credit hours. Living systems are interconnected and interacting. Living organisms must be able to perceive and respond to changes in their diverse and dynamic environments. Therefore, we consider biological systems at multiple functional scales to fully understand how organisms and their environments interact with and modify each other. Prerequisite: 'C' or better in BIOL 212 and BIOL 213. Prerequisite or co-requisite: BIOL 226.

BIOL 315 - Genetics and Evolution of Populations 4 credit hours. This course investigates modern evolutionary theory at the macro- and micro-evolutionary scale. Topics include historical perspectives, basic principles of evolution, mechanisms of evolution, genetics of populations, quantitative genetics and phylogenetics. Four hours of lecture per week. Prerequisite: BIOL 212; BIOL 213 recommended.

BIOL 320 - Toxicology 4 credit hours. This course explores the effects of chemicals (pollutants, pharmaceutical agents, etc.) on biological systems at the organismal level with emphasis on the effects of chemical exposure on human health. Topics include general principles of toxicology; the dose-response relationship; absorption,distribution, metabolism, and excretion; non-organ directed toxicity; target organ toxicity; risk assessment.

BIOL 322 - Botany 4 credit hours. A phylogenetic exploration of plants, with emphasis on adaptation of structure and function to different environments. Topics include anatomy, physiology, evolution, ecology, and economic botany. Three lectures and one two-hour laboratory period. Prerequisite: BIOL 150 (or equivalent) or BIOL 211 or ENVS 101.

BIOL 346 - Animal Nutrition 4 credit hours. Basic principles of animal nutrition, emphasizing characteristics and metabolism of nutrients, these nutrients in terms of feedstuffs, anatomy and physiology of gastrointestinal tracts, and nutritional lifecycles of various animals. Four lectures. Prerequisite: BIOL 211.

BIOL 348 - Animal Behavior 4 credit hours. A look at the study of animal behavior to interpret genetic, environmental, and physiological influences on development, control, adaptation and evolution of behavior. 4 lectures. Prerequisite: BIOL 211 and BIOL 226.

BIOL 353 - Tropical Biology 4 credit hours. This course is designed to introduce students to the basics of tropical ecology, evolution, and conservation biology with an 8-day trip in Belize. The course will involve a mixture of online classroom and field-based learning, and include excursions to some of the major ecosystems of Central America. Emphasis will be on the structure, function, and conservation of the rain forest and marine ecosystems and the species that comprise those systems. Prerequisite: BIOL 150 or 155 or ENVS 101. (Allen, even years)

BIOL 354 - Ecology 4 credit hours. Interactions of organisms and their environment with emphasis on populations, communities, and ecosystems. Three lectures and one three-hour laboratory. Prerequisite: BIOL 150 or 201 or ENVS 101. (Fall, alternate years)

BIOL 355 - Field Techniques in Plant Biology 4 credit hours. This course introduces the student to the taxonomy and adaptations of native and introduced vascular and non-vascular plants in western New York State ecosystems. Students will learn field identification of species through laboratory and field studies. Biodiversity of natural ecosystems will be investigated and compared. Physiological and anatomical responses to varying environmental conditions will be investigated. Summer term (even years).

BIOL 357 - Conservation Biology 4 credit hours. This course focuses on the biology that underlies our efforts to conserve genetic, species, and community diversity and the community/ecosystem/landscape dynamics that sustain them. We will review concepts of genetics, population biology, and landscape ecology to understand threats to populations and species and the techniques used to sustain them. Prerequisite: BIOL 150 or ENVS 101. (Cross-listed as ENVS 357)

BIOL 358 - Biogeography 4 credit hours. Biogeography looks at patterns of living things in space and time. By combining ecological, evolutionary, and geographic points of view, we will see how life has evolved around the globe to exploit physical differences such as soils and climate. Landscape ecology quantifies spatial structure, especially as affected by humans, in regions comprising one or more ecosystems. Relating the two approaches helps us to appreciate how populations have survived geographical constraints in the past and to predict how they might fare in the future. Geographic information systems will be demonstrated as an important contemporary tool in spatial ecology. Prerequisite: BIOL 226 and (BIOL 213 or 354).

BIOL 375 - Comparative Vertebrate Anatomy 4 credit hours. A comprehensive review of the structure, taxonomy, evolution, and biological relationships of vertebrates. Two lectures and two two-hour laboratories. Prerequisite: BIOL 211. (Alternate years)

BIOL 376 - Animal Physiology 4 credit hours. Principles and problems concerned with the physiochemical responses and functioning of animal tissues and organs. Three lectures and one three-hour laboratory period. Prerequisite: BIOL 375.

BIOL 390 - Junior Seminar 1 credit hours. Development of writing and interviewing skills critical in applying to graduate and professional schools, internships, and for employment. Students write and critique cover letters, resumes, essays and sample applications, take sample entrance examinations, interview a professional in a career of interest, and receive phone and face-to-face mock interviews with feedback on appropriate dress, mannerisms, and ability to respond to questions. Emphasis on professionalism. Prerequisite: BIOL 211 as Pre- or Co-requisite.

BIOL 400 - Research Topics 4 to 5 credit hours. Offerings are research-intensive courses that vary from year to year.

BIOL 402 - Immunology 4 credit hours. In this course students learn what makes up the immune system, and how it works in keeping us healthy. We'll also look at some of the more complex issues surrounding the immune system such as vaccination, autoimmune disease and transplantation. Upon completion of the course students will be able to name and describe the cells and organs of the immune system and understand the function of each. Students will also be able to describe the normal processes of immunity and regulatory controls, explain the results of immune component deficiencies and understand how normal immune function can cause disease. Prerequisite: BIOL 211 or 362; BIOL 302 recommended.

BIOL 405 - Bioinformatics 4 credit hours. This course emphasizes the hands-on application of bioinformatics methods in the context of a collaborative genomic annotation project. Students will gain experience in the application of existing software, as well as in combining approaches to answer specific biological questions. Prerequisite: BIOL 211; a statistics course is recommended. (Offered Fall, even years)

BIOL 420 - Biochemistry: Proteins and Metabolism 4 credit hours. Properties, biosynthetic pathways, and metabolism of carbohydrates, lipids, and nitrogenous compounds with related units on physical biochemistry, protein structure, bioenergetics and enzyme kinetics. Laboratories reinforce theoretical concepts and provide hands-on experience with modern biochemistry techniques and instrumentation. Three lectures and one three-hour laboratory. Prerequisite: Either [BIOL 211 and CHEM 316] or [(BIOL 211) and (CHEM 343 or CEMS 235), and (CHEM 310 or CHEM 315)]. (Cross-listed as CHEM 420)

BIOL 422 - Biochemistry: Nucleic Acids 4 credit hours. This course surveys the biochemistry of the gene, with an emphasis on protein/nucleic acid interactions. Topics include nucleic acid structure, regulation of DNA replication and transcription, post-transcriptional modification of RNA, recombinant DNA techniques, and genetic engineering methods.

BIOL 425 - Physiological Plant Ecology 4 credit hours. An exploration of plant function from the tissue to the whole organism level, with emphasis on interactions with the environment. Topics include plant-water relations, nutrition, energy and carbon cycling, development, and stress physiology. Three lectures and one three-hour laboratory. Prerequisite: BIOL 213, BIOL 226, and (CHEM 310 or 315). (Alternate years)

BIOL 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required. Independent Study is required of all students who are candidates for graduation with honors in Biology.

BIOL 485 - Internship in Biology 1 to 6 credit hours. Off-campus research in consultation with faculty and project advisors. Open to junior, senior and graduate biology students.

BIOL 490 - Senior Seminar 1 credit hours. An advanced topics seminar held once a week, conducted by enrolled students, local speakers, and outside speakers. Weekly topics and discussion will represent current research in a wide range of biological sciences. Prerequisite: Biology major with senior standing. (Offered Spring, every year)

BIPY 450 - Independent Study 1 credit hours.

CHEM 420 - Biochemistry: Proteins and Metabolism 4 credit hours. Properties, biosynthetic pathways, and metabolism of carbohydrates, lipids, and nitrogenous compounds with related units on physical biochemistry, protein structure, bioenergetics and enzyme kinetics. Laboratories reinforce theoretical concepts and provide hands-on experience with modern biochemistry techniques and instrumentation. Three lectures and one three-hour laboratory. Prerequisite: Either [BIOL 211 and CHEM 316] or [(BIOL 211) and (CHEM 343 or CEMS 235), and (CHEM 310 or CHEM 315)]. (Cross-listed as BIOL 420)

CHEM 422 - Biochemistry: Nucleic Acids 4 credit hours. This course surveys the biochemistry of the gene, with an emphasis on protein/nucleic acid interactions. Topics include nucleic acid structure, regulation of DNA replication and transcription, post-transcriptional modification of RNA, recombinant DNA techniques, and genetic engineering methods. Three hours lecture and one three-hour laboratory. (Students who wish to take only one semester of Biochemistry should take BIOL/CHEM 420.) Prerequisite: BIOL 212 or 362 and either CHEM 310 or 315. (Cross-listed as BIOL 422)

ENVS 357 - Conservation Biology 4 credit hours. This course focuses on the biology that underlies our efforts to conserve genetic, species, and community diversity and the community/ecosystem/landscape dynamics that sustain them. We will review concepts of genetics, population biology, and landscape ecology to understand threats to populations and species and the techniques used to sustain them. Prerequisite: ENVS 101 or BIOL 150. (Cross-listed as BIOL 357)

Chemistry

BCHM 390 - Junior Seminar 1 credit hours. Development of writing and interviewing skills critical in applying to graduate and professional schools, internships, and for employment. Students write and critique cover letters, resumes, essays and sample applications, take sample entrance examinations, interview a professional in a career of interest, and receive phone and face-to-face mock interviews with feedback on appropriate dress, mannerisms, and ability to respond to questions. Emphasis on professionalism.

CHEM 105 - General Chemistry I 3 credit hours. A systematic study of the fundamental principles, theories and calculations involved in chemistry. Basic concepts of bonding, chemistry of selected elements and their compounds, states of matter, stoichiometry, gases, calorimetry, and solution reactions. Laboratory work includes experiments in stoichiometry, qualitative and quantitative analysis.

CHEM 106 - General Chemistry II 3 credit hours. A continuation of the systematic study of the fundamental principles, theories and calculations involved in chemistry. Basic concepts of equilibrium, kinetics, electrochemistry, thermodynamics, nuclear chemistry, and an introduction to organic, materials and inorganic chemistries. Laboratory work includes experiments in stoichiometry, qualitative and quantitative analysis. Prerequisite: CHEM 105/105L or CHEM 115.

CHEM 200 - Special Topics in Chemistry 1 to 4 credit hours.

CHEM 300 - Special Topics in Chemistry 1 to 4 credit hours. This course explores special topics in chemistry appropriate for sophomore, junior, and senior level students majoring in chemistry or related fields. Contact the course instructor for additional information about any CHEM 300 course offering. Prerequisite: CHEM 105 and CHEM 106, or permission of instructor.

CHEM 310 - Basic Organic Chemistry 3 credit hours. A descriptive study of the structure and reactions of common aliphatic and aromatic compounds of carbon. For students interested in ceramics, materials science, environmental science, or ecology, but not suitable for chemistry majors or those interested in biochemistry, molecular biology, or the health professions. Prerequisite: CHEM 106 or CHEM 116 or permission of instructor.

CHEM 315 - Organic Chemistry I 3 credit hours. An introduction to organic compounds. Topics include structure identification using modern spectroscopic methods, bonding and reactions such as nucleophilic substitutions, eliminations and additions to alkenes. Prerequisite: CHEM 105 and 106.

CHEM 316 - Organic Chemistry II 3 credit hours. An in-depth exploration of the chemistry of carbon-based compounds. Topics include enolates, reductions, oxidations, additions to the carbonyl, the Diels-Alder reaction, radicals Aromatic reactions, aromaticity, carbohydrates and amino acid chemistry. Prerequisite: CHEM 315.

CHEM 321 - Introduction to Analytical Chemistry 4 credit hours. A study of classical analytical techniques involving equilibria of aqueous systems as well as simple modern analytical techniques involving the methods and instrumentation of spectrophotometry and separation science will be presented. Laboratory exercises will include inorganic synthesis, "traditional wet methods of analysis," and instrumental methods of analysis. Two lectures and two three-hour laboratories per week. Prerequisite: CHEM 106 or CHEM 116.

CHEM 343 - Physical Chemistry I 4 credit hours. The first semester of our physical chemistry sequence covers thermodynamics from a combined classical/statistical perspective and chemical kinetics. Pre-requisite: CHEM 106, MATH 152, and PHYS 112 or 126.

CHEM 345 - Physical Chemistry Laboratory 1 credit hours. This course explores concepts in thermodynamics, kinetics, and quantum mechanics through seven laboratory experiments performed as teams in a simulated corporate research environment. Students are strongly encouraged to co-enroll in CHEM 346 or the equivalent. Prerequisite: CHEM 343 or CEMS 235.

CHEM 346 - Physical Chemistry II 3 credit hours. The second semester of our physical chemistry sequence covers quantum mechanics and spectroscopy. Prerequisite: CHEM 343 or CEMS 235.

CHEM 370 - Chemistry Projects 1 or 2 credit hours. Laboratory work or literature review involving a chemical topic of interest to the student and not covered in any of the regular course work. A final written report is required. CHEM 370 cannot be substituted for any of the required courses in the chemistry major and cannot be used to fulfill the additional credits needed for an ACS certified degree. A chemistry minor may count up to three credits of CHEM 370 toward the minor. Laboratory work that can be considered original research in chemistry should be performed as an Independent Study or an ARGUS project (CHEM 450). Prerequisite: Permission of instructor, a study plan approved by the Division Chair, and CHEM 106.

CHEM 372 - Inorganic Chemistry 3 credit hours. Principles of inorganic chemistry with emphasis on periodicity, symmetry and group theory, molecular orbital theory, bonding, acid/base chemistry, coordination chemistry, organometallic compounds, and catalysis. Prerequisite: CHEM 343 or CES 235.

CHEM 374 - Inorganic Chemistry Laboratory 1 credit hours. Eight to ten experiments designed to demonstrate the synthetic techniques used in modern inorganic chemistry. Inert atmosphere techniques will be included. Co-requisite: CHEM 372.

CHEM 400 - Advanced Chemistry Topics 1 to 4 credit hours. Special topics not covered by regular course work. All special topics courses must have the written approval of the Division Chair and should in general meet the criteria of the American Chemical Society's requirements for an advanced course. Prerequisite: CHEM 346, although this can be waived at the discretion of the Division Chair.

CHEM 423 - Instrumental Analysis 3 credit hours. The theory and practice of modern instrumentation techniques and methods used in chemistry are presented. An in-depth look at spectroscopic, separation, and electrochemical methods and their associated instrumentation follow an introduction to instrumentation; interpretation of results is also covered. Required for chemistry majors. Prerequisite: CHEM 321 and CHEM 346 or equivalent.

CHEM 450 - Independent Study 1 to 4 credit hours. Original chemical research under faculty guidance. The work must have the potential to be published. An Approved Plan of Study and a written final report are required. Oral reports may also be required.

CHEM 461 - Advanced Chemistry Laboratory I 2 credit hours. A laboratory course integrating synthesis, purification, analysis, and characterization of chemical species. Synthetic work includes use of controlled atmospheres, high temperatures and non-aqueous systems. Purification of compounds is by distillation and recrystallization, as well as by various chromatographic techniques. Analysis and characterization include

both wet chemical and instrumental techniques. Co-requisite: CHEM 423. Prerequisite: CHEM 321 and CHEM 346 or equivalent.

CHEM 485 - Internship in Chemistry 2 to 6 credit hours. Off-campus research in consultation with faculty and an off campus project advisor. An approved plan of study and a written final report are required. Oral reports may also be required. The work must represent original research in chemistry and have the potential to be published. Open to juniors and seniors. Prerequisite: Permission of instructor, a study plan approved by the Division Chair and in general, CHEM 343 although this can be waived by the Division Chair.

CHEM 490 - Chemistry Seminar 0 credit hours. The Chemistry Seminar is a three semester advanced topics course with a varied format ranging from outside speakers to development of skills such as literature searches, resumes, poster presentations and oral presentations.

Communication Studies

COM 216 - Video Production 4 credit hours. This course offers an introduction to basic video production techniques and processes allowing for the creation of group-based projects. The main focus of the course is practical, affording students an opportunity inside and outside of class to produce dramatic and non-fiction original works.

Computer Science

CSCI 156 - Computer Science I 4 credit hours. This course is an introduction to the fundamental concepts of computer programming using Python. Topics include conditional statements, loops, recursion, procedural programming, scope of variables, doc-strings, unit-testing, dictionaries, simulation, creating and using modules and packages, and object-oriented programming.

CSCI 157 - Computer Science II 4 credit hours. This course covers the fundamental concepts of data structures and algorithms including stacks, queues, linked lists, trees, heaps, sorting algorithms, and mathematical analysis of running time. Prerequisite: CSCI 156 or permission of instructor.

CSCI 205 - Database Systems 4 credit hours. This course introduces essential database management with relational database management system SQLite and Python. The topics covered include creation and deletion of databases; basic and extended query formulation; entity relationship diagrams and their conversion to table design; and integrating and applying normalization techniques.

CSCI 206 - Algorithm Design 4 credit hours. This course studies Algorithim design techniques including greedy algorithms, divide and conquer, dynamic programming and network flow. Additional topics include computational complexity and the P versus NP problem. Prerequisite: CSCI 156. (Offered Spring, odd years)

CSCI 225 - Computer Organization 4 credit hours. This course is an introduction to computer architecture and organization. The primary topics include an overview of hardware design and memory hierarchy, evaluation of performance metrics, computer arithmetic, and control structures.

CSCI 305 - Theory of Computation 4 credit hours. This course studies computational theory in the context of theoretical computer science and mathematics. Topics include finite automata and languages, computability and Turing machines, decidability and

incompleteness theorems. Prerequisite: MATH 281. (Cross-listed as MATH 305) (Offered Fall, odd years)

CSCI 315 - Computer Networking 4 credit hours. This course is an introduction to the design of computer networking. Primary topics include internet organization, internet protocol suite, and the basics of network security. Further topics could include wireless networking and software defined networking.

CSCI 450 - Independent Study 1 to 4 credit hours. Independent study is undertaken by the student under the supervision and guidance of the instructor. Written Plan of Study required.

Dean's Office CLAS

CLAS 101 - Transfer Seminar 1 credit hours. As the cornerstone of the College of Liberal Arts and Sciences Transfer Student Program, this seminar provides an opportunity for students to get to know the intellectual community they have joined, while introducing them to campus resources that will help them succeed. Throughout the seminar, students further develop core skills that lead to academic and professional accomplishment. The Transfer Student Program also facilitates mentoring relationships among the transfer students and their faculty and peers. Graded Pass/Fail.

ISM 495 - Baccalaureate Project 4 to 6 credit hours. Senior project within the Individually Structured Major Program under supervision of the student's Advisory Board. Prerequisite: Permission of Advisory Board Chair.

Education

EDUC 100 - Topics in Education 1 to 4 credit hours. Topics not covered in other Education courses are presented. May be repeated for credit.

EDUC 105 - Education Perspectives 1 credit hours. This course introduces the field of education and the resources available at Alfred University necessary for academic, personal, and professional accomplishment in the field.

EDUC 120 - School Violence Prevention and Intervention Workshop (SAVE) 0 credit hours. This workshop provides teacher candidates with training in school violence prevention and intervention. Topics include: the warning signs that relate to violence or signal precursors to violent behavior in children; the statutes, regulations and policies relating to a safe, nonviolent school climate; academic supports and management strategies that promote a nonviolent school climate; methods for integrating social skill development and problem-solving skills into ongoing curriculum and instruction; intervention techniques for addressing violent situations; and, referral processes for students with violent behaviors. This course must be completed prior to student teaching.

EDUC 121 - Child Abuse Identification and Reporting Workshop 0 credit hours. This workshop is approved by, and designed to meet certification regulations of, the New York State Education Department (NYSED). The workshop includes objectives related to detecting and reporting child abuse; meeting professional and legal responsibilities related to child abuse; strategies for preventing child abduction. This course must be completed prior to student teaching.

EDUC 122 - Dignity for All Students Workshop (DASA) 0 credit hours. This workshop fulfills the training requirement on harassment, bullying, and discrimination

prevention and intervention under the NYS Dignity for All Students Act. This is a participatory workshop which includes activities to help students understand and address personal and hidden biases as well as related behaviors and the school setting. Topics include: introduction to the Dignity for All Students Act and reporting requirements for educators and more. This course must be taken prior to student teaching.

EDUC 230 - Psychological Foundations of Education 3 credit hours. This course is a survey of human developmental processes and variations, particularly as related to learning, motivation, and communication. Emphasis is placed on applying psychological knowledge, understanding, and skills to stimulate and sustain student interest, cooperation, and achievement in the classroom.

EDUC 231 - Social Foundations of Education 3 credit hours. This introductory course discusses the function of education in society, and, in particular, the organization of the American school system, the influences affecting our schools, and present practice and trends. This course includes the Safe Schools Against Violence in Education (SAVE) workshop required for teacher certification.

EDUC 300 - Special Topics 1 to 4 credit hours. Topics not covered in other Education courses are presented. May be repeated for credit.

EDUC 305 - Integration of Computer Science and Computational Thinking in K-12 Education 3 credit hours. An analytical introduction to the role of technology, computing, thinking, and modelling in K-12 teaching and learning. The contemporary perspectives, current trends and discussions, future possibilities and challenges in education related to the computational thinking and modeling. Theoretical, practical and hands-on approaches and opportunities to enrich school curriculum with CT. Students registered in this course must be open to some self-directed learning and programming.

EDUC 345 - Education Fieldwork 3 credit hours. This course is designed for those students seeking New York State certification in the Middle Childhood, Adolescence and special subject areas. It includes a minimum of 100 hours of documented observation in a pre-assigned placement, along with projects, activities and the development of an initial teaching narrative. Students should design their schedules to include a significant block of time, compatible with the school day, in order to complete the required observation hours. Prerequisite: EDUC 230 and 231 and declaration of minor in education, or permission of instructor.

EDUC 374 - Integrated Methods: Social Studies, Science, Mathematics, and Computer Application 6 credit hours. The integrated methods course combines the teaching of Social Studies, Science, Mathematics and Computer Application into one six credit course and is taught in conjunction with classroom practicum experiences in Early Childhood/Childhood Education. Through these integrated experiences, practicum students will develop the initial ability and skill to: plan and implement appropriate learning experiences; become familiar with the purpose and contents of New York State Learning Standards in content areas and demonstrate the ability to relate these standards with the ongoing process of instructional planning; distinguish among and apply a variety of teaching approaches to accommodate differing developmental needs and learning styles of students and engage students in active learning; become familiar with appropriate strategies to assess the diverse needs of students and develop professional teacher communication and interpersonal skills. Prerequisite: Admission into the Early Childhood/Childhood Education Program.

EDUC 375 - Early Childhood/Childhood Practicum 3 credit hours. The practicum provides opportunities for students to observe actual classroom settings, gaining "hands on" experience while taking concurrent course work. This course includes three full days a week of field experience in two different grade level placements. Field placements in local school systems provide an opportunity for students to blend theory with practice and experiential application. Transportation to area schools is required.

EDUC 400 - Topics in Education 1 to 4 credit hours. Topics not covered in other Education courses are presented.

EDUC 405 - Literacy in the Content Area 3 credit hours. The course shows teachers how to apply reading methodology to subject area learning. It takes a balanced approach, providing a realistic and practical treatment of reading and methodology issues, theory and research. Prerequisite: EDUC 230 and 231 and declaration of minor in education, or permission of instructor.

EDUC 413 - Using Literature in Intermediate and Adolescent Classrooms 3 credit hours. This course takes a practical approach to the study and selection of literature for use in teaching intermediate and adolescent students. The riches of classical and contemporary writings for classroom use are overviewed. Various educational methods which integrate children's literature into the intermediate and adolescent curriculum are reviewed. Prerequisite: EDUC 230 and 231 and declaration of minor in education, or permission of instructor.

EDUC 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

EDUC 460 - Seminar in Teaching and Professional Development 3 credit hours. Taken concurrently with EDUC 462 and EDUC 463, this course addresses general issues of professional development of educators. Topics include, but are not limited to classroom management, teaching learning process, and issues of professionalism.

EDUC 461 - Student Teaching for Early Childhood/Childhood Certification 12 credit hours. Cooperating schools make it possible for student teachers to practice teach under typical public school conditions. The Division of Education, the major department, and cooperating teacher supervises observation, teaching, and discussion. Open only to students who are approved by the Division of Education. Transportation to area schools is required. Fingerprint clearance is recommended.

EDUC 462 - Student Teaching for Middle/Adolescent Certification 12 credit hours. Cooperating schools make it possible for student teachers to practice teach under typical public school conditions. The Division of Education, the major department, and cooperating teacher supervises observation, teaching, and discussion. Open only to students who are approved by the Division of Education. Transportation to area schools is required. Fingerprint clearance is recommended.

EDUC 463 - Student Teaching-Art Education 12 credit hours. Cooperating schools make it possible for student teachers to practice teach under typical public school conditions. The Division of Education, the major department, and cooperating teacher supervises observation, teaching, and discussion. Open only to students who are approved by the Division of Education. Transportation to area schools is required. Fingerprint clearance is recommended.

EDUC 464 - Seminar in Professional Development: Visual Arts 3 credit hours. Taken concurrently with EDUC 463, this course addresses specific issues of

professional development of art educators. Topics include, but are not limited to classroom management; management of art materials, teaching learning process in art, collaboration with school professionals and issues of professionalism. Students will develop the initial teaching portfolio using LIVETEXT.

EDUC 471 - Methods of Teaching Literacy 6 credit hours. This course involves a study of the planning and implementation of literacy instruction birth-grade 6. The big ideas of early literacy; phonemic awareness, alphabetic principle, fluency, vocabulary and comprehension instruction for all students, including those with special needs, will be covered. Prerequisite: Admission into the Early Childhood/Childhood Education Program.

EDUC 472 - Competency Skills in Teaching Literacy 3 credit hours. This course gives students an opportunity to demonstrate achieved competency skills for teaching literacy at the Early Childhood/Childhood level. Attention will be given to the current New York State Learning Standards and how to incorporate these standards into the curriculum. Prerequisite: EDUC 471 and admission into Student Teaching in Early Childhood/Childhood Education.

EDUC 473 - Assessment in the Early Childhood/Childhood Classroom 3 credit hours. This course examines assessment procedures, strategies, and techniques used and constructed for early childhood/childhood classroom teaching and learning purposes. Traditional and nontraditional means of assessment will be explored and an emphasis is placed on the alignment of assessment, instruction and content.

EDUC 474 - Orientation to the Early Childhood/Childhood Classroom 3 credit hours. This course helps students focus on problems, opportunities and challenges of the early childhood/childhood curriculum and classroom. It covers such issues as teacher awareness, teacher expectations, modeling, classroom management and grouping, as well as the socialization process within the early childhood/childhood classroom.

EDUC 488 - Current Teaching Methods: Middle Childhood Subjects 3 credit hours. Discussion of goals, methods, and materials used to successfully teach middle childhood subjects. Classroom observation and teaching required. Prerequisite: EDUC 230 and EDUC 231, declaration of minor in education.

EDUC 489 - Current Teaching Methods: Adolescent Subjects 3 credit hours. Discussion of goals, methods, and materials used to successfully teach middle/ adolescence and special subjects. Prerequisite: EDUC 230 and EDUC 231, declaration of minor in education.

EDUC 491 - Methods and Curriculum in Art Education 3 credit hours. This course provides a foundation and introduction to a variety of teaching methods as well as techniques, methods and materials for art education. This course helps with the transition to teacher as students prepare for student teaching placement. Prerequisite: EDUC 230 and 231; Pre- or Co-requisite: EDUC 345, declaration of minor in education.

SJST 456 - Human Development: Exceptionality 3 credit hours. This course covers the range of physical, cognitive, communication, and social/emotional exceptionalities in human development from childhood to early adulthood. One focus is on the commonalities, not just the differences, between children and youth with disabilities and their nondisabled peers. A second focus is on understanding the different contexts of disability. Prerequisite: EDUC 230 and 231 and declaration of minor in education, or permission of instructor. (Cross-listed as SPED 456)

SPED 456 - Human Development: Exceptionality 3 credit hours. This course covers the range of physical, cognitive, communication, and social/emotional exceptionalities in human development from childhood to early adulthood. One focus is on the commonalities, not just the differences, between children and youth with disabilities and their nondisabled peers. A second focus is on understanding the different contexts of disability. Prerequisite: EDUC 230 and 231 and declaration of minor in education, or permission of instructor. (Cross-listed as SJST 456)

English

ENGL 101 - Writing I 4 credit hours. Study and application of the basic principles of written communication: correctness, clarity, concreteness, effective organization, and accepted forms of documentation.

ENGL 102 - Writing II 4 credit hours. This course offers intensive experience in essay writing. Through the close reading of literature and the practical experience of writing, students explore rhetorical strategies, learn accepted forms of documentation, develop a sense of voice, and deepen their responses to the written word. (ENGL 102 is prerequisite to 300 and 400-level studies in English.)

ENGL 200 - Special Topics in Writing 2 or 4 credit hours. A series of introductory writing courses, each being a study of a subject not covered in other 200-level courses. Topics may include feature writing, magazine writing, or writing in other specialized areas.

ENGL 202 - Fiction Workshop 4 credit hours. For beginning prose writers, a course on the elements, styles, and techniques of contemporary fiction and narrative. Students experiment with subject and voice with an emphasis on creating characters. Portfolio exam.

ENGL 206 - Poetry Workshop 4 credit hours. A beginning writing course in poetry with an emphasis on originality and freshness of language and a basic understanding of poetic form. Required work includes extensive reading of contemporary poets, weekly writing, peer review, and a final portfolio of revised poems.

ENGL 211 - The Short Story 2 or 4 credit hours. This introductory course may adopt one or more of the following approaches: an historical survey of the genre, examining the emergence and growth of this literary form; an aesthetic treatment; a cultural stance, illustrating how class, gender, and ethnicity influence literary texts; a thematic ordering, revealing how different works treat familiar themes.

ENGL 213 - Introduction to Poetry 2 or 4 credit hours. This course introduces students to the main traditions of English verse and the fundamentals of poetic form. Selections include the major poets of the English language, as well as contemporary British, Irish, and American poets.

ENGL 214 - Introduction to Drama 2 or 4 credit hours. A study of plays as literature, parallel to other genres, but unique by way of staging and performance. The course examines comedy and tragedy as well as less traditional dramatic forms. Readings are drawn from plays of ancient Greece and Rome, the Middle Ages and the Renaissance, the Neoclassical Period, and the twentieth century.

ENGL 217 - Blood, Guts and Alphabets: The Gory Truth about Children's Literature 4 credit hours. Blood, Guts and Alphabets explores the gritty truth about children's literature. From picture books and fairy tales, to intermediate and YA fiction,

we'll think about what it means to be a child, and what it means to be human, what children's literature is for, and how it reflects many of the difficult truths and injustices of the actual world we live in. Who's afraid of the big bad wolf? We aren't. (Offered on demand)

ENGL 220 - Special Topics in Literature 2 or 4 credit hours. A series of introductory courses, each being a study of literature not covered in other 200-level courses.

ENGL 222 - The Harlem Renaissance 4 credit hours. In this course students explore the literature and music of African-Americans produced in and around Harlem in New York City in the 1920s to the 1940s. Central to such exploration will be the contemporary cultural and political issues that faced the Afro-American artist. (Cross-listed as SJST 222)

ENGL 225 - Shakespeare and Cinema 2 or 4 credit hours. This course explores some of Shakespeare's most popular plays and their film adaptations. Students focus on the literary analyses of character, theme, and language in the written texts. We also compare the cultural contexts of representative comedies, tragedies, and histories, with their contemporary film settings.

ENGL 226 - The Holocaust and Literature 4 credit hours. In this course students examine the Nazi destruction of the European Jews through diaries, survivors' memoirs, novels, poetry and drama. Additionally, representations of the Holocaust in art, recorded testimony, public memorials, film and music are explored. (Cross-listed as SJST 226)

ENGL 230 - Special Topics in Film 2 or 4 credit hours. A series of introductory courses, each being a study of film not covered in other 200-level film courses.

ENGL 243 - Lunatics, Lovers, and Poets: Southern Storytellers 2 or 4 credit hours. Southerners don't hide their skeletons in closets; they invite them into the living room to entertain at tea. This course focuses on works which examine what Flannery O'Connor defined as the Southern grotesque-individuals "forced to meet the extremes of their own nature." Exploring the world created when tragic merges with comic, other writers might include Faulkner, Williams, Welty, Percy, Crews, Dickey, and Tyler.

ENGL 254 - Women Writers 2 or 4 credit hours. A course that examines issues of language, gender, and culture portrayed through the lens of the woman writer. Texts may include novels, stories, autobiographies, essays, letters, and poetry. (Cross-listed as SJST 254, WGST 254)

ENGL 256 - Multicultural American Literature 4 credit hours. This course explores the rich diversity of American literature, raising questions like What does it mean to be or become American? What is gained, what is lost, what can be protected or preserved? What is the meaning of the past, of roots, of traditions? Students examine how this body of literature reimagines the dominant American culture and reflect on their own multicultural competence. (Cross-listed as SJST 256, WGST 256)

ENGL 281 - Literature and Science 2 or 4 credit hours. "Three quarks for Muster Mark" (James Joyce). This course will explore and challenge the boundaries separating disciplines. Fictional representations of emerging technologies, medical nightmares, and futuristic utopias and dystopias are all possibilities for discussion.

ENGL 292 - Tales of Terror 2 or 4 credit hours. "Only the perverse fantasy can save us" (Goethe). If you like women in white, gray castles, and dark secrets, this course is for you. An exploration of the conventions and tropes in Gothic literature.

ENGL 293 - Writers Gone Wild: Literature and the Environment 4 credit hours. We explore representations of the natural world in literary texts, asking questions like "does my dog really love me or am I anthropomorphizing?" "Is gardening an act of love, ownership, creativity, or something else entirely?" "Are we really leading lives of quiet desperation, and how can hoeing beans help?"

ENGL 325 - Survey of British Literature I 3 credit hours. This course provides an overview of early British literature: from Beowulf to Milton, it also includes Chaucer; 16th and 17th Century Poetry and Drama; Shakespeare and the Jacobeans. Prerequisite: One 200-Level Literature course.

ENGL 326 - Survey of British Literature II 3 credit hours. This course provides an overview of British literature after 1660: from the Restoration to the Modernists, it also includes 18th-Century Poetry, Drama, and Prose; 19th and 20th-Century Novels; Romantic, Victorian, and 20th-Century Poetry. Prerequisite: One 200-level Literature course.

ENGL 327 - Survey of American Literature 4 credit hours. This course introduces students to American literature in cultural context, with particular attention to constructs of Americanness as they appear in or are challenged by literary texts. Prerequisite: One 200-level Literature course.

ENGL 328 - The Language of Literary Art 4 credit hours. This course introduces students to the elements of literary art. Through a sequence of readings and problems, students gain an understanding of diction, figuration, genre, point of view, and context as shaping components of literary form. Prerequisite: ENGL 102.

ENGL 400 - Major Figures in Literature 2 or 4 credit hours. A series of courses, each being a detailed examination of the work of a single major writer. Currently these include: Homer, Dante, Swift, Hardy, Lawrence, Cather, Hemingway, Faulkner, and Morrison.

ENGL 402 - British Gothic Fiction 4 credit hours. Through fiction and film, we'll examine two-and-a-half centuries of haunted castles, murderous monsters, and dark mysteries. We'll explore the evolving literary, cultural, and historical forces that made these works of terror so popular.

ENGL 406 - A Medieval Bookshelf 4 credit hours. This course introduces students to the connections between medieval English literature, its classical sources, and medieval European literatures.

ENGL 407 - Chaucer 4 credit hours. This course introduces students to Chaucer's works. All readings are in Middle English, and students will gain competence in reading and pronouncing Chaucer's English. Readings include" The Book of the Duchess," excerpts from "The Legend of Good Women," "Troilus and Criseyde," and excerpts from "The Canterbury Tales."

ENGL 408 - Women Writers in the Middle Ages 4 credit hours. This course examines the writings of medieval women - abbesses, merchants, wives, mothers, and mystics - to explore the challenges female writers such as Heloise, Margery Kempe, Julian of Norwich, and Christine de Pizan presented to orthodox Christianity, to gender stereotypes, and to medieval political and social structures. (Cross-listed as WGST 408)

ENGL 409 - American Realism: Race/Class/Gender/Place 4 credit hours. Realism claims to offer life as it is actually lived, to offer not the Truth but the truths of human experience. Through both classic and new-canonical works of realism, naturalism, and

regionalism, this course explores how individuals are located in social and geographic places.

ENGL 410 - English Renaissance Literature 4 credit hours. This course focuses on the poetry and drama of the sixteenth and seventeenth centuries. The Elizabethan, the metaphysical, and the classical traditions of poetry are represented by Spenser, Shakespeare, Donne, Jonson, and Milton; the Elizabethan-Jacobean drama is presented by such dramatists as Marlowe, Jonson, and Webster.

ENGL 411 - Shakespeare's Comedies and Histories 4 credit hours. This course introduces theories of comedy and explores Shakespeare's development as a comic dramatist as students read the festive and romantic comedies, comparing his early efforts with his mature plays. It also examines Shakespeare's dramatization of English and Roman history, the genre of the history play, and the playwright's adaptation of history to the comic and tragic modes.

ENGL 412 - Shakespeare's Tragedies 4 credit hours. This course focuses on Shakespeare as a tragic artist. It introduces theories of tragedy, explores the playwright's experimentation with the genre, comparing his early efforts with his mature accomplishments, and examines some tragi-comedies.

ENGL 413 - The Eighteenth Century 4 credit hours. This course explores the works of such authors as Jane Austen, Oliver Goldsmith, Matthew Lewis, Lady Mary Wortley Montagu, and Jonathan Swift against the background of eighteenth-century values and ideas. Genres include the novel, drama, and poetry.

ENGL 414 - English Romantic Movement 4 credit hours. This course focuses on the well-known works of Blake, Wordsworth, Coleridge, Byron, Shelley, and Keats as well as on the less well known but important works of writers such as Anna Barbauld, Mary Robinson, and John Clare. Poems will be supplemented by works of fiction associated with British Romanticism such as Mary Shelley's "Frankenstein."

ENGL 415 - Victorian Literature 4 credit hours. This course focuses on major Victorian poets and novelists such as Alfred Lord Tennyson, Matthew Arnold, Robert Browning, Elizabeth Barrett Browning, Christina Rossetti, Gerard Manley Hopkins, Charles Dickens, the Brontes, Thomas Hardy, and Oscar Wilde.

ENGL 422 - Irish Literature: 1690-Present 4 credit hours. A nation rich in song and story, Ireland has produced a distinctive national literature. This course explores three centuries of Irish writing. Genres include narrative, drama, and poetry. Selections include Swift, O'Rathaille, O'Bruadair, Mangan, Wilde, Shaw, Pearse, Yeats, Joyce, Heaney, and Kavanagh.

ENGL 424 - Life and Art of James Joyce 4 credit hours. This course focuses on Joyce's fiction, including "Dubliners," "A Portrait of the Artist as a Young Man," "Ulysses," and selections from "Finnegans Wake." Biographical readings will accompany the literature, and Homer's "Odyssey" will be studied in parallel with Joyce's "Ulysses."

ENGL 431 - 19th Century American Literature 4 credit hours. This course explores the diverse literary experiments of a nation striving toward cultural and aesthetic independence. Readings and critical perspectives vary according to instructors.

ENGL 432 - 20th Century American Visions 4 credit hours. This course examines modern and postmodern literary experiments as manifested in American culture. Readings and critical treatments vary according to instructors.

ENGL 433 - British and American Poetry 4 credit hours. The "experience of each new age requires a new confession, and the world seems always waiting for its poet" (Emerson). Selected readings introduce representative poetic voices throughout each British and American age, from the Middle Ages to the present, from Beowulf to Prufrock.

ENGL 434 - African-American Literature 4 credit hours. This course traces the directions of African-American literature from the slave narrative through the Harlem Renaissance to contemporary fiction, drama, and poetry. Writers such as Frederick Douglass, Jean Toomer, Zora Neale Hurston, Langston Hughes, Richard Wright, Ralph Ellison, Lorraine Hansberry, James Baldwin, Alice Walker, and Toni Morrison are included.

ENGL 442 - Modern and Contemporary Drama 2 or 4 credit hours. This course begins with the birth of the modern play in the late 19th century, then traces the evolution of dramatic literature to the present time. Readings selected from such playwrights as Ibsen, Strindberg, Chekhov, Shaw, O'Neill, Williams, Miller, Ionesco, Albee, Baraka, Pinter, Stoppard, Shepard, Shaffer, Norman, and Mamet.

ENGL 445 - Modernism 4 credit hours. An examination of innovative poetry, fiction and drama produced in the first half of the twentieth century in England, Ireland, and America, with selected texts in translation when appropriate.

ENGL 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

ENGL 451 - Publishing Practicum 4 credit hours. Students work through all aspects of the process to publish an edition of an out-of-copyright text: conducting market research, selecting and editing the primary text, researching and writing an introduction, creating appropriate timelines and appendices, laying out the book using InDesign, designing the cover, procuring ISBN and Library of Congress numbers, submitting the text to the printer, and publishing the book using a print-on-demand model. Prerequisite: ENGL 102. (Cross-listed as COMM 451)

ENGL 459 - Literary Criticism and Theory 2 or 4 credit hours. This course examines how literature has been approached and understood from the time of Plato to the present day. Readings are selected from those critical and theoretical statements which have most profoundly influenced literary response and even literature itself.

ENGL 460 - Special Topics Seminar-Writing 1 to 4 credit hours. A series of courses, each being an advanced study of a subject not covered in detail by other 400-level courses. Prerequisite: ENGL 328 or one 200-level creative writing course (ENGL 200-206).

ENGL 461 - Special Topics Seminar-Literature 1 to 4 credit hours. A series of courses, each being an advanced study of a subject not covered in detail by other 400-level courses.

ENGL 472 - Dramatis Personae 4 credit hours. An advanced poetry writing course for students interested in exploring character dynamics through the vehicle of the persona. Each student is expected to invent several personae and to write in the voices of those characters. The primary focus of the course is the writers' workshop. Prerequisite: ENGL 328 or one 200-level creative writing course (ENGL 200-206).

ENGL 474 - Writing the Short Story 4 credit hours. This course is an intensive writing workshop with an emphasis on the dynamics of the short story. Students are encouraged to experiment with form while learning the techniques of the well-crafted story. Portfolio exam. (May be repeated one time for credit.) Prerequisite: ENGL 328 or one 200-level creative writing course (ENGL 200-206).

ENGL 475 - Writing Formal Poetry 4 credit hours. This advanced creative writing course focuses on the appreciation and craft of formal poetry. Students will learn to write in iambic meters, and will learn definitions and read examples of traditional forms such as blank verse, sonnets, sestinas, villanelles, triolets, and ghazals. The primary focus on the course will be the writers' workshop, in which students compose and critique poems written in traditional forms. Prerequisite: ENGL 328 or one 200-level creative writing course (ENGL 200-206).

ENGL 481 - International Women Writers 4 credit hours. In this course we explore literature written by contemporary women from different cultures. Study focuses on voice, content, and style, with some attention to the conditions in which the work was produced and to its reception. (Cross-listed as WGST 481)

ENGL 485 - Internship in English 1 to 4 credit hours. An off-campus independent study project under the direction of a faculty sponsor. Students gain exposure to possible careers related to English studies. Requirements for this project include a journal, job evaluations, and a final report. May be taken during the summer or semester abroad.

ENGL 496 - English Honors Thesis 2 credit hours. To graduate with Honors in English, students must attain a cumulative GPA of 3.30 in their major, successfully complete this senior project, and pass an oral examination. Eligible seniors should discuss their project plans with the Division Chair before registering for ENGL 496.

ESL 101 - English Skills for Multilingual Students 4 credit hours. This course focuses on building skills in listening, speaking, grammar and writing for students whose first language is not English.

ESL 102 - Reading and Vocabulary Development for Multilingual Students 2 credit hours. This course focuses on developing English language reading skills in four crucial areas: extensive reading, vocabulary development, comprehension, and reading fluency. Students will gain practice in each area, allowing them to tackle their academic reading load more effectively.

ESL 400 - Special Topics 1 to 4 credit hours.

ESL 401 - Speaking and Listening 2 credit hours. This course will help non-native English speakers improve their speaking and listening skills. Students will work on pronunciation, oral presentation, and extracting meaning from conversations and other kinds of extended discourse.

SJST 222 - The Harlem Renaissance 4 credit hours. In this course students explore the literature and music of African-Americans produced in and around Harlem in New York City in the 1920s to the 1940s. Central to such exploration will be the contemporary cultural and political issues that faced the Afro-American artist. (Cross-listed as ENGL 222)

SJST 226 - The Holocaust and Literature 4 credit hours. In this course students examine the Nazi destruction of the European Jews through diaries, survivors' memoirs,

novels, poetry and drama. Additionally, representations of the Holocaust in art, recorded testimony, public memorials, film and music are explored. (Cross-listed as ENGL 226)

SJST 254 - Women Writers 2 or 4 credit hours. A course that examines issues of language, gender, and culture portrayed through the lens of the woman writer. Texts may include novels, stories, autobiographies, essays, letters, and poetry. (Cross-listed as ENGL 254, WGST 254)

SJST 256 - Multicultural American Literature 4 credit hours. This course explores the rich diversity of American literature, raising questions like What does it mean to be or become American? What is gained, what is lost, what can be protected or preserved? What is the meaning of the past, of roots, of traditions? Students examine how this body of literature reimagines the dominant American culture and reflect on their own multicultural competence. (Cross-listed as ENGL 256, WGST 256)

WGST 254 - Women Writers 2 or 4 credit hours. A course that examines issues of language, gender, and culture portrayed through the lens of the woman writer. Texts may include novels, stories, autobiographies, essays, letters, and poetry. (Cross-listed as ENGL 254, SJST 254)

WGST 256 - Multicultural American Literature 4 credit hours. This course explores the rich diversity of American literature, raising questions like What does it mean to be or become American? What is gained, what is lost, what can be protected or preserved? What is the meaning of the past, of roots, of traditions? Students examine how this body of literature reimagines the dominant American culture and reflect on their own multicultural competence. (Cross-listed as ENGL 256, SJST 256)

WGST 408 - Women Writers in the Middle Ages 4 credit hours. This course examines the writings of medieval women - abbesses, merchants, wives, mothers, and mystics - to explore the challenges female writers such as Heloise, Margery Kempe, Julian of Norwich, and Christine de Pizan presented to orthodox Christianity, to gender stereotypes, and to medieval political and social structures. (Cross-listed as ENGL 408)

WGST 481 - International Women Writers 4 credit hours. In this course we explore literature written by contemporary women from different cultures. Study focuses on voice, content, and style, with some attention to the conditions in which the work was produced and to its reception.(Cross-listed as ENGL 481)

Environmental Studies/Geology

ENVS 100 - Special Topics 1 to 4 credit hours. Consideration of environmental issues and topics introduced in 100-level courses. Topics vary from term to term.

ENVS 101 - Environmental Studies I - Natural Science 4 credit hours. An introductory science course for environmental studies majors, which may also be used by other students to fulfill graduation requirements in natural sciences. This course provides an understanding of basic ecological principles and an awareness of the interaction of physical, chemical, and biological forces on Earth.

ENVS 106 - The Water Planet 4 credit hours. All ecosystems on earth depend on water, but the supply of fresh, clean water is limited and endangered. In this course, students study the water cycle and how humans interact with this limited resource. Emphasis is placed on practical activities (measurement and analysis of water) and contemporary environmental issues threatening our water supply, including oceanic dead zones, anthropogenic pollution in precipitation, impacts of over withdrawal of

groundwater (e.g. subsidence, sinkholes) and effects of climate change on water availability.

ENVS 200 - Special Topics 1 to 4 credit hours. Further consideration of environmental issues and topics introduced in 200-level courses. Topics vary from term to term.

ENVS 203 - Climate Change and Society 4 credit hours. Global climate change is an environmental problem with consequences on natural systems, but also on human health, agriculture, infrastructure, economics, social justice, and other facets of the human experience. This course will provide an overview of the background science explaining global climate change. We will then identify risks and vulnerabilities our world is exposed to, as well as solutions that can be found in climate change mitigation and adaptation.

ENVS 205 - Environmental Data Analysis 4 credit hours. Basic techniques and tools for manipulation of quantitative data, emphasizing environmental studies, data collection, analysis on spreadsheets and statistical packages, graphical presentation. Prerequisite: ENVS 101 or permission of instructor.

ENVS 206 - Fieldcraft-Outdoor Proficiency 4 credit hours. This course helps students acquire basic skills to 1) use field tools and 2) build habits essential to the study of environmental and geological sciences. Topics include note taking, map reading, navigation, data collection and data sharing. Prerequisite: One Geology or Environmental Studies course plus permission of instructor. (Cross-listed as GEOL 206)

ENVS 220 - Introduction to Geographic Information Systems 4 credit hours. This course engages students in spatial thinking while providing them with the fundamentals to manipulate geographic (geospatial) data and utilize the ArcGIS geographic information system (GIS) for map production, spatial analysis and problem solving.

ENVS 240 - Environmental Research Procedures I 3 credit hours. In this course, students are taught contemporary methods for studying and solving environmental problems. These include geological, biological, and geographical methods. Students are given the opportunity in the course to learn and practice the procedures while working on relevant problems.

ENVS 241 - Environmental Research Procedures II 3 credit hours. Continuation of ENVS 240. In this course, students are taught contemporary methods for studying and solving environmental problems. These include geological, biological, and geographical methods. Students are given the opportunity in the course to learn and practice the procedures while working on relevant problems. Prerequisite ENVS 240.

ENVS 300 - Special Topics 1 to 4 credit hours. Further considerations of environmental issues introduced in 100 and 200-level courses.

ENVS 301 - Contemporary Topics in Geospatial Technology 2 credit hours. Practical exploration of selected, currently relevant topics in geospatial technology. Topics may include server-side GIS technology, GIS project management, data set manipulation, biophysical interpretation, classification algorithms, change detection, or pattern recognition. The course will evolve to stay current with the rapidly evolving geospatial industry.

ENVS 302 - Mobile and Web-based GIS 4 credit hours. This course will focus on the basics of web-based mapping. Time will be spend developing skills in geospatial web authoring tools and their links with location-based services. Mobile applications and development will also be explored.

ENVS 310 - Ecology of the Bahamas 3 credit hours. We explore concepts central to ecology through the exploration of Bahamian plant and animal life, using an immersive, natural history approach. We observe connections between natural selection, biogeography, disturbances and historic land use. The course features a week-long field trip at the Gerace Research Center, Bahamas. Prerequisite: ENVS 101 or BIOL 150 - plus permission of instructor.

ENVS 315 - Herpetology 3 credit hours. This course explores the scientific study of reptiles and amphibians. Topics include evolution, taxonomy, natural history, ecology, conservation issues and the techniques used to study reptiles and amphibians. Prerequisite: ENVS 101 or BIOL 150 or permission of instructor.

ENVS 320 - Advanced GIS Applications 4 credit hours. This course advances the learning outcomes of Introduction to GIS (ENVS 220); namely to engage in spatial thinking while utilizing the ArcGIS geographic information system (GIS). Advanced applications include the raster spatial data model, remote sensing and spatial statistics. Prerequisite: ENVS/CSCI 220 or permission of instructor.

ENVS 330 - Ornithology 4 credit hours. This course explores what makes birds unique. Topics include evolution, taxonomy, natural history, ecology, and conservation. Students will also spend time outside developing identification skills and learning scientific field research techniques. Prerequisite: ENVS 101, BIOL 150, or permission of instructor.

ENVS 351 - Environmental Biogeochemistry 4 credit hours. Transformation and movement of elements on Earth, with emphasis on effects of humans and potential global change. Projects involve field and instrumental analyses. Prerequisite: ENVS 101 and CHEM 105 or permission of instructor.

ENVS 360 - Junior Seminar 1 credit hours. Students in this course attend weekly seminars on pertinent topics related to Environmental Studies. Required of all Environmental Studies majors.

ENVS 400 - Special Topics 1 to 4 credit hours. Further considerations of environmental issues introduced in lower level courses.

ENVS 415 - Natural Resources Management 3 credit hours. An introduction to the pressures and principles guiding the management of land, plants and wildlife. We discuss the philosophical and policy contexts within which management decisions are made, the associated governance and stewardship issues, and the technical tools available.

ENVS 440 - Environmental Research Planning 2 credit hours. How research in environmental fields is developed, proposed, performed, and presented, with an emphasis on research projects to be conducted as required independent studies for Environmental Studies majors.

ENVS 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

ENVS 485 - Internship in Environmental Studies 1 to 4 credit hours. An off-campus independent study project. Students gain experience by serving as interns at public agencies or private firms which deal with environmental problems. Instructor permission required.

ENVS 490 - Senior Seminar 2 credit hours. Students in this course will be guided through some of the common aspects of their senior research projects, such as literature searches, task mapping, and development of analytical protocols. All students will be required to present a weekly report on the progress of their senior research. Students will also attend the weekly Environmental Studies seminar series and learn about research techniques and procedures used by professionals. Required of all ENVS majors.

ENVS 499 - Senior Project in Environmental Studies 2 to 4 credit hours. Independent research under an instructor's supervision. Presentation of project is required for graduation.

GEOL 101 - This Dynamic Earth 4 credit hours. An introduction to the nature of the materials that make up the earth, their genesis and arrangement (both inside the earth and at the surface) and to the physical processes that act upon them. Topics include: rocks and minerals, the structure of the earth, plate tectonics, land forms. Three lectures and a laboratory.

GEOL 103 - Earthquakes and Volcanoes 4 credit hours. This course reviews what is presently known about earthquakes and volcanoes, investigates ways to reduce loss of life and property, and explores some current research which may lead to a better understanding of these violent natural events.

GEOL 104 - Earth and Life through Time 4 credit hours. An introduction to the history of the earth and life on it, and to the techniques for "reading" these from the rock record. Topics include geologic time, sedimentary rocks and depositional environments, fossils, ancient and recent geologic events and the evolution of life. Three lectures and a laboratory.

GEOL 106 - Elementary Oceanography 4 credit hours. A study of the major contemporary concepts of biological, chemical, geological, and physical oceanography. The nature and origin of ocean basins, sea water composition, water masses, oceanic circulation, waves, tides, marine ecology, biological productivity, sedimentation, and plate tectonic theory are discussed.

GEOL 200 - Special Topics in Geology 1 to 4 credit hours. This course discusses topics of either general or specific nature not covered in detail in other 100 or 200-level courses, for example the evolution and extinction of the dinosaurs. (Sufficient demand)

GEOL 201 - Surficial Geology 4 credit hours. In this study of the earth's surface materials, major topics include weathering and soil formation, glacial deposits, aeolian deposits, surface water hydrogeology and related geomorphology. Three lectures and one laboratory per week. Prerequisite: One of GEOL 101, GEOL 104, ENVS 101; or permission of instructor.

GEOL 206 - Fieldcraft-Outdoor Proficiency 4 credit hours. This course helps students acquire basic skills to 1) use field tools and 2) build habits essential to the study of environmental and geological sciences. Topics include note taking, map reading, navigation, data collection and data sharing. Prerequisite: One Geology or Environmental Studies course plus permission of instructor. (Cross-listed as ENVS 206)

GEOL 301 - Structural Geology 4 credit hours. Students learn how to recognize deformational features such as folds, faults, joints and dikes; how to, correlate these with three dimensional geometric techniques such as folding lines and stereographic nets; and how to derive from these features the important tectonic parameters active

at the time of their formation: maximum stress direction, principal stress differences, confining pressure and strain rate. Prerequisite: one geology course.

GEOL 302 - Mineralogy and Petrology 4 credit hours. Description, classification, and genetic interpretation of the rock forming minerals and the igneous and metamorphic rocks which are formed from them. Focus will be on mineral and rock associations in space and time, with emphasis on tectonic and environmental interpretations. Prerequisite: one 100-level geology course or permission of instructor.

GEOL 307 - Stratigraphy and Sedimentation 4 credit hours. The chemical and physical processes leading to weathering, erosion, transport, deposition, lithification and alteration of sediments are considered along with the economic aspects of sedimentary rocks, such as the occurrence of oil, natural gas, and coal. Prerequisite: one geology course or permission of instructor.

GEOL 400 - Special Topics in Geology 1 to 4 credit hours. A discussion of topics appropriate to current geological phenomena, including such topics as environmental geochemistry or economic geology. (Sufficient demand)

GEOL 408 - Tectonics 4 credit hours. The formation and evolution of cratons, rifts, Atlantic type margins, shear zones and island arcs are discussed in this course. A detailed study is made of the geological structure and history of the Appalachians, Rockies, Alps and Himalayas. (Alternate years)

GEOL 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

GEOL 464 - Hydrogeology 4 credit hours. An examination of the hydrologic system as a whole and in parts. Emphasis is on subsurface water and hydrogeochemistry. Additional topics may include water use and management, water pollution, and flood control. Laboratories emphasize field and laboratory techniques of water quality and quantity analysis. Prerequisite: GEOL 201 or permission of instructor.

SCIE 127 - Doing Science 4 credit hours. In this course, students learn science by doing science, planning and executing their own experiments devised to answer questions they have about a central theme. This course is taught by faculty from different scientific or mathematics backgrounds who guide students in their investigations. Content will cover a broad range of scientific disciplines, emphasizing earth, environmental and life sciences. Fulfills the CLAS Quantitative Reasoning basic competency and counts as a "Scientific Inquiry" course in general education.

Equestrian

EQUS 100 - Special Topics 2 credit hours. Offerings in riding or other equestrian physical activity which vary year to year.

EQUS 101 - English Riding: Level I 2 credit hours. Open to students with little or no riding experience for basic hunter seat equitation taught at the walk, trot and canter. Topics include horse grooming, hoof care, safety procedures (on and off the horse), care of riding equipment, and a horse's health.

EQUS 102 - English Riding: Level II 2 credit hours. Competent hunter seat flat riders are introduced to jumping, trail and recreational riding. The course emphasizes safety and training riders to recognize their own abilities in the ring, on the trail, or in the barn.

Topics include horse care, cost and management of one's own horse. Prerequisite: EQUS 101 or permission of instructor.

EQUS 103 - English Riding: Level III 2 credit hours. Riders entering this course should have a secure hunter seat at the walk, trot and canter and should exhibit good control over single fences (maximum height two feet). This course further conditions riders for more strenuous exercises on the flat and the course requires riders to jump small courses. Prerequisite: EQUS 102 or permission of instructor.

EQUS 104 - English Riding: Level IV 2 credit hours. Riders at this level should be competent to walk, trot, canter, and jump with reasonably good equitation. This course furthers the riders' abilities over higher (maximum three feet) fences and more complex courses. Riders continue practice teaching and, time permitting, pleasure and practice sessions, as well. Prerequisite: EQUS 103 and permission of instructor.

EQUS 110 - Western Riding: Level I 2 credit hours. Open to students with little or no riding experience in the western disciplines. Skills taught include: bridling, saddling, and horsemanship for the walk, jog and lope. Topics include grooming, hoof care, lungeing, safety procedures, care of horse and equipment.

EQUS 111 - Western Riding: Level II 2 credit hours. Open to students with beginning experience in the western disciplines. Skills taught include: western pleasure, horsemanship and showmanship patterns. Topics include safety procedures, proper tack, attire, equipment, and care of horse. Prerequisite: EQUS 110 or permission of instructor.

EQUS 112 - Western Riding: Level III 2 credit hours. Open to students with intermediate experience in the western disciplines. Skills taught include: western pleasure, horsemanship, showmanship and introductory trail obstacles found on trail course patterns. Topics include showing the all-around horse at breed shows, safety procedures, care of horse and equipment. Prerequisite: EQUS 111 or permission of instructor.

EQUS 113 - Western Riding: Level IV 2 credit hours. Open to students with intermediate or above experience in the western disciplines. Skills taught include: speed events including barrel racing, pole bending, stake race, and goat tying. Topics include: safety procedures, care of horse and equipment and introductory knowledge of team penning. Prerequisite: EQUS 112 and permission of instructor.

EQUS 118 - Introduction to Reining 2 credit hours. Designed for the advanced rider who wants to become proficient in riding reining patterns. Lecture topics include: general knowledge and observation of reining patterns, condition of the horse needed to compete in reining, health, safety issues, and the shoeing needs of reining horses. Lab skills include: loping circles, lead changes, spins, run downs, sliding stops, and roll backs. Prerequisite: EQUS 112 or permission of instructor.

EQUS 120 - Driving I 2 credit hours. Open to all students regardless of horse experience. Students learn safe ground handling practices and basic horse care as well as harnessing, hitching and driving single horses. Other topics include safely starting a horse in harness and exploring historical and current disciplines in driving.

EQUS 121 - Driving II 2 credit hours. Students learn safe ground handling practices around draft horse pairs, including harnessing, line driving, hitching and driving implements. Additional topics include care and management of draft horses and draft horse showing. Prerequisite: EQUS 120.

EQUS 122 - Driving III 2 credit hours. Students apply draft horse driving and management skills in hands-on field work. Course topics include the use of horses to do work, driving a variety of implements and tools, and the modern uses of draft horses in the industry. Prerequisite: EQUS 121.

EQUS 200 - Special Topics 1 to 4 credit hours. An open theory/classroom course varying in content from year to year.

EQUS 201 - The Art and Theory of Equitation 4 credit hours. This course emphasizes the philosophy and theory of equitation, producing a deeper understanding and strengthening of students' mental and physical approach to riding. Both the schooling and competitive frame of mind of horse and rider are included and the rider is expected to get the most out of his/her mount and know that particular horse's abilities, habits and limits. An asset to show preparation. Prerequisite: EQUS 105 or 113 or equivalent.

EQUS 205 - Introduction to Equine Science 4 credit hours. This course covers classroom studies of anatomy, nutrition, disease, and veterinary aspects of owning a horse or running a stable. Barn assignments deal with particular injuries and there are demonstrations with horses in terms of wrapping various wounds and treating common equine ailments.

EQUS 210 - Methods of Teaching English Riding 4 credit hours. Students in this course are required to observe teaching of classes and to discuss objectives and methods with the instructor. In time the student acts as apprentice teacher under the instructor's supervision. When ready, the student assumes the role of instructor with the responsibility of setting up safety rules and class curriculum. The student's efforts are reflected in the riders' progress. Prerequisite: EQUS 103.

EQUS 215 - Equine Business Management 4 credit hours. Students learn about the management aspects of a stable including: the needs and basic care of the equine, layout and design of stables, and running a stable as a business.

EQUS 216 - Horse Show Management 4 credit hours. Students learn what is involved in managing a horse show including planning, prize list, advertising, officials, knowledge of rules of sanctioning organizations, ordering awards. Students must be available to work some weekends at shows held at Equestrian Center. At the end of the semester, students manage their own show at the Center.

EQUS 218 - Judging Horse Shows 4 credit hours. Open to students with advanced level riding skills in either English or Western riding. Students will learn how to evaluate and place conformation, halter and performance classes according to the standards set by various organizations and breeds of horses.

EQUS 223 - Hunter and Jumping Course Design 2 credit hours. Technical aspects and differences between hunter, jumper, equitation and stadium jumping courses will be discussed. Hands on application will be provided by assisting show managers with course design at shows at the Equestrian Center along with assisting instructors with setting jumps for jumping classes.

EQUS 225 - Equine Nutrition 2 credit hours. This course examines digestive physiology; involving carbohydrates, proteins, fats, minerals and vitamins. Also, a practical approach to proper feedstuffs and use of quality feedstuffs to maintain health and productivity of horses.

EQUS 226 - Caring for the Equine Anatomy 2 credit hours. Guest speakers introduce students to alternative equine anatomy care and caring for the equine anatomy in

general. An equine chiropractor, a saddle fitter and farrier, among others, discuss the importance of their professions in caring for the horse's anatomy. Students learn the history and benefits of equine massage, study equine skeletal anatomy, connective tissue, muscle location (origin and insertion) and function.

EQUS 228 - The Equine Industry in Ireland 2 credit hours. Students learn about the strategies for the development and promotion of the internationally competitive Irish Sport Horse Industry, which has evolved as a collaboration of the governing bodies of Ireland with Irish Sport Horse Breeders. Travel to Ireland for 10 days is a required part of the course.

EQUS 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

General Education

BCHM 422 - BioChem: Nucleic Acids 4 credit hours. This course surveys the biochemistry of the gene, with an emphasis on protein/nucleic acid interactions. Topics include nucleic acid structure, regulation of DNA replication and transcription, post-transcriptional modification of RNA, recombinant DNA techniques, and genetic engineering methods

BCHM 490 - Senior Seminar 1 credit hours. An advanced topics seminar held once a week, conducted by enrolled students, local speakers, and outside speakers. Weekly topics and discussion will represent current research in a wide range of biological sciences.

CLAS 100 - Special Topics in Liberal Arts and Sciences 1 to 4 credit hours. Opportunities are provided for the examination of interdisciplinary topics not normally justified as regular offerings. Topics vary from year to year.

CLAS 201 - The Big Questions: Humanities for Engineers 3 credit hours. In this team-taught course, we consider some of the big questions of our time and all time from a variety of disciplinary perspectives (such as literature, philosophy, religious studies, and history), paying particular attention to the value of the humanities from a STEM point of view. Open only to students in Inamori School of Engineering. (Offered Fall, every year)

GLBS 485 - Internship in Global Studies 1 to 4 credit hours. Internships with an international focus may receive Global Studies credit. Please contact the Director of Global Studies for more information.

ISM 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course by the student in the Individually Structured Major program, under supervision of the student's ISM board. Approved Plan of Study required.

SJST 434 - African-American Literature 4 credit hours. This course traces the directions of African-American literature from the slave narrative through the Harlem296 Renaissance to contemporary fiction, drama, and poetry. Writers such as Frederick Douglass, Jean Toomer, Zora Neale Hurston, Langston Hughes, Richard Wright, Ralph Ellison, Lorraine Hansberry, James Baldwin, Alice Walker, and Toni Morrison are included.

UNIV 086 - Becoming a Saxon 0 credit hours. A course designed to acquaint new AU students to our campus and help you navigate our system of education to enhance your potential for success as an AU Saxon.

WGST 222 - Stage Makeup & Theory 4 credit hours.

Health and Human Performance

ATHT 103 - Prevention and Care of Athletic Injuries 4 credit hours. An introduction to the athletic training profession, inflammation process, anatomy review, rehabilitation, recognition and prevention of common athletic injuries, taping, rehabilitation and evaluation skills in a laboratory portion, including fifty (50) clock hours of athletic training room observation, cleaning duties, and ACI assignments. A lab fee may be assessed.

ATHT 104 - Introduction to Clinical Experiences in AT 1 credit hours. An introduction to practical experience courses with supervision provided by a Certified Athletic Trainer in an athletic training environment at Alfred University. A minimum of 50 clock hours is required. Prerequisite: ATHT 103 and ATHT 111.

ATHT 105 - Perspectives in the Health Professions 1 credit hours. This course introduces health professions and the resources available at Alfred University necessary for academic, personal, and professional accomplishment in the fields.

ATHT 110 - Medical Sciences 2 credit hours. This course provides a general overview of career opportunities in athletic training and other health/wellness related fields. Emphasis is placed on the domains of athletic training and application of them with regard to health and wellness in active populations.

ATHT 111 - Emergency Medicine in Athletic Training 3 credit hours. Basic level life support techniques including CPR, rescue breathing, and care of choking victim in conjunction with first aid techniques such as using a sling, splinting controlling bleeding and ambulation. Satisfies requirements for American Red Cross Professional Rescuer Certification.

ATHT 190 - Principles of Strength Training and Reconditioning 2 credit hours. This course is intended to cover the essentials of strength training and reconditioning to prepare a student who is interested in becoming a Certified Strength and Conditioning Specialist or a Certified Personal Trainer. One hour of lecture and two hours of physical activity each week.

ATHT 200 - Special Topics 1 to 4 credit hours. Topics of interest in Athletic Training are explored. Topics vary from term to term.

ATHT 201 - Clinical Experience in Athletic Training I 1 credit hours. Practical experience supervised by a Certified Athletic Trainer in an athletic training environment at Alfred University. A minimum of 50 clock hours is required. Emphasis on clinical proficiencies of basic first aid, wound care, preventative taping and wrapping, record keeping, and ACI assignment during sports season. Prerequisite: Formal retention within ATEP, ATHT 103 and ATHT 111. A lab fee may be assessed.

ATHT 202 - Clinical Experience in Athletic Training II 1 credit hours. Practical experience supervised by a Certified Athletic Trainer in an athletic training environment at Alfred University. A minimum of 100 clock hours is required. Emphasis on clinical proficiencies pertaining to etiology, pathology, treatment and management of athletic injuries and illnesses and ACI assignments during sports season. Prerequisite: Formal retention within ATEP, ATHT 103 and 210. A lab fee may be assessed.

ATHT 205 - Structural Kinesiology 3 credit hours. This course focuses on the anatomical and mechanical components of human movement. An emphasis will be placed on the functional anatomy of the musculoskeletal and articular systems. Additional focus will be placed on examining the neuromuscular system and basic biomechanical principles associated with human movement.

ATHT 210 - Advanced Athletic Training 3 credit hours. The study of specific concerns related to the field of athletic training in order to develop a thorough understanding of the etiology, pathology, treatment and management of athletic injuries and illnesses. Prerequisite: ATHT 103.

ATHT 215 - Personal Health and Wellness 2 credit hours. This course provides students with knowledge of current health problems including physical fitness, nutrition, and major diseases, and encourages application of this knowledge for healthful living.

ATHT 222 - Nutrition for Human Performance and Exercise 2 credit hours. This course focuses on human nutrition and metabolism, with particular emphasis on the implications of nutrition on human performance and physical activity.

ATHT 232 - Introduction to Sports Management 3 credit hours. This course introduces the student to the sport management profession. Students are provided a comprehensive look at basic organizational structure found in the sport industry. Emphasis is placed on leadership, planning and policy development, program evaluation, legal and financial issues and other attributes required of a sport manager. Students also become acquainted with career opportunities in the sport management field.

ATHT 242 - Sports, Society, and Ethics 3 credit hours. In this course we investigate the social significance of sport and use the sociological perspective for understanding the nature of sport. We examine current and historical events, rules, laws and governing organizations. Topics include values, principles, racial and gender equity, coaching, commercialization, enhancing stimulants and ergogenic aids, eligibility, violence, sportsmanship and Code of Ethics in sports.

ATHT 265 - Integrative Therapeutic Applications I 3 credit hours. This course is designed to provide students with an introduction to the applications of therapeutic modalities integrated with appropriately applied therapeutic exercise techniques in professional practice for the prevention, care, and rehabilitation of athletic injuries. This course includes a one-hour per week laboratory component. Prerequisite: ATHT 210.

ATHT 276 - Integrative Therapeutic Applications II 3 credit hours. This course is designed to provide students with an advanced study of the applications of therapeutic modalities integrated with appropriately applied therapeutic exercise techniques in professional practice for the prevention, care, and rehabilitation of athletic injuries. This course includes a one-hour per week laboratory component. Prerequisite: ATHT 265.

ATHT 300 - Topics in Athletic Training 1 to 4 credit hours. Topics of interest in Athletic Training are explored. Topics vary from term to term.

ATHT 301 - Clinical Experience in Athletic Training III 1 credit hours. Practical experience supervised by a Certified Athletic Trainer in an athletic training environment at Alfred University. A minimum of 100 clock hours is required. Emphasis on clinical proficiencies of advanced taping and bracing techniques, medication record keeping, the asthmatic athlete, skin conditions, and nutritional consideration, ACI assignment during sports season. Prerequisite: Formal retention within ATEP, ATHT 103 and 210. A lab fee may be assessed.

ATHT 302 - Clinical Experience in Athletic Training IV 1 credit hours. Practical experience supervised by an Approved Clinical Instructor (ACI)/Certified Athletic Trainer in an athletic training environment at Alfred University or affiliated site. A minimum of 150 clock hours is required. Emphasis on clinical proficiencies to advanced understanding of the etiology, pathology, treatment and management of athletic injuries and illnesses. Clinical assignment to ACI during season. Prerequisite: Formal retention within ATEP, ATHT 301. A lab fee may be assessed.

ATHT 310 - Orthopedic Procedures 2 credit hours. This course is designed to expose students to clinical examination, imaging, surgical interventions, as well as various other orthopedic procedures that are commonly seen in the allied health profession. Prerequisite: ATHT 103.

ATHT 320 - Psychosocial Strategies in Athletic Training 2 credit hours. This course is designed to provide a basic understanding of the psychology of (and strategies to help overcome issues within) sport, injury, and rehabilitation. Topics covered include emotion, motivation, mental skills training and use, psychological antecedents of injury, psychology of injury and rehabilitation, professional involvement, psychosocial-physiologic conditions, substance abuse and diversity. Prerequisite: PSYC 101.

ATHT 334 - Physical Evaluation of the Lower Extremity 3 credit hours. This course is designed to provide students with an intensive, thorough study of orthopedic evaluation techniques used within the clinical and on-field environments to assess athletic related injuries to the lower extremity sustained by physically active individuals. Normal joint kinematics and subsequent pathomechanics will also be discussed. This course includes a one-hour per week laboratory component. Prerequisite: Formal retention within ATEP and ATHT 210; or permission of instructor.

ATHT 341 - Evaluation of the Head, Neck, and Spine 2 credit hours. This course is designed to provide students with an intensive, thorough study of orthopedic evaluation techniques used within the clinical and on-field environments to assess athletic related injuries to the head, neck, or spine sustained by physically active individuals. Normal joint kinematics and subsequent pathomechanics are also be discussed. This course includes a one-hour per week laboratory component. Prerequisite: BIOL 207 and formal retention within the ATEP.

ATHT 348 - Physical Evaluation of the Upper Extremity 3 credit hours. This course is designed to provide students with an intensive, thorough study of orthopedic evaluation techniques used within the clinical and on-field environments to assess athletic related injuries to the upper extremity sustained by physically active individuals. Normal joint kinematics and subsequent pathomechanics will also be discussed. This course includes a one-hour per week laboratory component. Prerequisite: Formal retention within ATEP and ATHT 210; or permission of instructor.

ATHT 390 - Junior Seminar 1 credit hours. This course is designed to prepare the junior level athletic training student for the BOC examination and clinical internship experience. The course focuses on reviewing the various NATA consensus and position statements, emergency planning, therapeutic modalities and rehabilitation, as well as general injury pathology. Students are required to take the Junior Comprehensive Examination as a requirement of this course. Students must have junior-level standing in the Athletic Training Program.

ATHT 392 - Biomechanics 2 credit hours. The study of skeletal, joint, and muscular systems in the human body, including analysis of muscular-skeletal movement applied

to exercise, sports, and dance-related skills. Emphasis will be placed on the principle of rigid body mechanics (statics and dynamics), Newton's Laws and how they govern human movement in sport and exercise. Prerequisite: Concurrent enrolment in ATHT 205.

ATHT 393 - Physiology of Exercise 4 credit hours. The study of physiological changes in the body with exercise, sports, and dance activities. Emphasis on neuromuscular, cardiovascular, and respiratory systems, and their adaptations to training. Prerequisite: BIOL 208 or permission of instructor.

ATHT 401 - Clinical Experience in Athletic Training V 1 credit hours. Practical experience supervised by a Certified Athletic Trainer in an athletic training environment at Alfred University. A minimum of 150 clock hours is required. Emphasis on clinical proficiencies of advanced assessment and management of injuries to the lower extremity, as well as therapeutic modalities. ACI assignment during sports season. Prerequisite: Formal retention within ATEP, ATHT 334 and 348. A lab fee may be assessed.

ATHT 403 - Medical Aspects of Athletic Training 1 credit hours. This is a course for senior athletic training students. It is designed to expose the athletic training student to the necessary recognition, evaluation and treatment skills needed to assess a variety of medical conditions affecting athletes and physically active individuals. Emphasis will be on developing clinical proficiencies of advanced assessment related to pathologies and disorders affecting the endocrine, exocrine, respiratory and autonomic nervous systems.

ATHT 420 - Pharmacology in Athletic Training 2 credit hours. This course is designed as an introduction to pharmacology. Pharmacodynamics, pharmacokinetics, drug interactions and reactions will be discussed. Extra attention will be given to drugs commonly used in sports medicine. This course is offered primarily for athletic training majors.

ATHT 432 - Organization and Administration of Athletics 2 credit hours. An in-depth study of administrative techniques including budgeting, personnel, and the use of computers in the athletic setting.

ATHT 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

ATHT 459 - Research Design in Athletic Training 2 credit hours. In this course students establish or advance their understanding of research through critical exploration of research language, ethics and approaches. The language of research is introduced, along with ethical principles and challenges, and the elements of the process within quantitative, qualitative, and mixed methods approaches. Students use these theoretical underpinnings to begin to critically review literature relevant to athletic training, which allows students to formulate their own research proposal to the Human Subjects Review Committee.

ATHT 469 - Research Methods in Athletic Training II 1 credit hours. A continuation of ATHT 459, this course provides students an opportunity to either complete the research project that was submitted to the Alfred University Human Subjects Review Committee or to complete other in-class research. Prerequisite: ATHT 459.

ATHT 485 - Clinical Internship in Athletic Training 4 credit hours. Provides seniors with an opportunity for off-campus affiliated clinical experience related to the field of

athletic training and sports medicine. Emphasis on the clinical proficiencies pertaining to administrative responsibilities. Practical experience supervised by a Certified Athletic Trainer. A minimum of 200 clock hours is required. Prerequisite: Concurrent enrollment in ATHT 495.

ATHT 490 - Senior Seminar in Athletic Training 1 credit hours. Capstone educational course focusing on preparing the athletic training student for the BOC exam, graduate school/job applications, and career development issues. Review of athletic training domains, exam simulations, mock interviews, and practical application of skills will be emphasized. Prerequisite: ATHT 301, ATHT 302.

ATHT 495 - Current Topics in Athletic Training 2 credit hours. This course is designed to serve as a culmination of the athletic training curriculum. This capstone course addresses current prevention, assessment, and rehabilitation of the most common conditions found in an athletic training work environment. Pharmacological and professional development topics will also be addressed. Additional material will be presented pertaining to the contemporary issues affecting the current state of the athletic training profession. Prerequisite: ATHT 432.

COAC 291 - Philosophy, Principles and Organization of Athletics in Education 3 credit hours. This course covers basic philosophy and principles as integral parts of physical education and general education; State, local and national regulations and policies related to athletics; legal considerations; function and organization of leagues and athletic associations in New York State; personal standards for the responsibilities of the coach as an educational leader; public relations; general safety procedures; general principles of school budgets; records; purchasing; and use of facilities.

COAC 301 - Health Sciences Applied to Coaching 3 credit hours. This course is a series of interactive exercises and activities designed to help students gain information about health sciences and coaching, organize it, and apply it to their particular programs. The course helps to define selected principles of biology, anatomy, physiology, and kinesiology related to coaching.

COAC 475 - Theories and Techniques of Coaching Sports 2 credit hours. This course begins with a discussion of the basic concepts common to all sports. Topics include a history of interscholastic athletics in New York State and the objectives, rules, regulations and polices of athletics. An internship that includes practical experience as a coach in a specific sport and/or periods of observing other coaches is required. Prerequisite: COAC 291; Pre- or co-requisite: COAC 301.

COAC 485 - Coaching Sports Internship 1 credit hours. This internship is for students who wish to gain certification to coach in a second sport.

HFMT 200 - Special Topics in HFMT 1 to 4 credit hours. Topics of interest are offered. Topics vary term to term.

HFMT 305 - Field Experience in Health Fitness Management 1 credit hours. This course serves to allow students to apply theory discussed in the classroom in a practical setting similar to that in which they have interest in working. Students spend time observing and/or assisting professionals in a professional setting as assigned by the instructor.

HFMT 405 - Program Design and Implementation in Health Fitness Management 3 credit hours. This course applies principles learned in prior courses to more advanced concepts, including power lifting, agility, and plyometrics techniques, while investigating

emerging concepts in strength training and fitness. Concepts learned in lecture are applied in the lab setting. Prerequisite: BIOL 208, ATHT 111, ATHT 190.

HFMT 410 - Exercise Prescription 4 credit hours. In this course we take a "hands-on approach" that applies basic exercise testing principles of cardiovascular fitness, muscular strength and endurance, flexibility, nutrition, and body composition to specific populations. Different screening and testing devices, along with psychological health/mentality pertaining to exercise, are investigated. Prerequisite: BIOL 208, ATHT 111, ATHT 392.

HFMT 420 - Special Populations and Health Appraisal 2 credit hours. This course is designed to provide students with the understanding of exercise and conditioning as they relate to special populations. Content includes: identifying factors of special populations; risk factors associated with special populations, guidelines for exercise test administration, and the principles of exercise prescription for special populations ranging from cancer patients to pregnancy. Prerequisite: BIOL 208 and ATHT 432.

HFMT 485 - Internship 3 credit hours. This course is designed to allow students to apply theory, concepts, and competencies discussed in the classroom to real situations in a professional setting. A variety of sites, depending on the career goal of the student, may be chosen. Prerequisite: Senior standing; HFMT 305.

HFMT 490 - Senior Seminar 1 credit hours. This course provides education focusing on preparing the Health Fitness Professional, including health fitness management students, for potential certification exams (NSCA, ACSM, NASM, etc.), graduate school/job applications, and career development issues. A variety of learning techniques, such as exam simulations, mock interviews, and practical application of skills, are emphasized as the student transitions from student to professional. Prerequisite: Senior standing.

HFMT 495 - Health Promotion Program Design 2 credit hours. The focus of this course is the promotion of healthcare, healthy living, and health-related programs to various populations. Depending upon the population being served, healthcare and/or health lifestyle needs may differ and require specific programming. Topics of discussion include current national and regional health lifestyle trends and what type of programming may best serve specific populations. This course looks into the design of programs that best fill these needs. Prerequisite: Senior standing.

Human Studies

HIST 107 - The World in the 20th Century 4 credit hours. Surveys political, social, economic, and intellectual movements shaping twentieth century states and peoples. Special attention is devoted to the decline of European hegemony, the rise of the United States, and the evolution of "emerging" nations in Asia, Africa, and the Americas.

HIST 111 - Modern Western History 4 credit hours. A survey of developments in Europe and the Western Hemisphere since the 1500s, with emphasis on the impact of ideas and ideologies (including Fascism, Nazism, and Communism), social and economic change (including industrialism), revolutions and world wars, and imperialism.

HIST 120 - The Ancient Mediterranean 4 credit hours. Survey of civilizations that helped shape modern-day Eurasia and North Africa - Mesopotamia, Egypt, Minoan Crete, Israel, Greece, Persia, and Rome. Emphasis on the interaction of these cultures

around the Mediterranean Sea. Evaluation based on short papers, exams and quizzes, and participation.

HIST 121 - Medieval Cultures 4 credit hours. Exploration of the three dominant cultures of the medieval period: Europe, the Byzantine Empire, and the Islamic world, with a special focus on their interactions.

HIST 152 - The Spectacular Spanish Empire: Rise, Decline, Influence 4 credit hours. "Spectacular" and "fascinating" have been used to describe the largest empire ever to exist. Covering ca. 1492·1975, this course traces Spain's "rise and fall" while examining developments in nationalism and imperialism in Europe and in the Americas, Topics include politics, culture, and Spain's legacy in the modern world.

HIST 200 - Topics in History 1 to 4 credit hours. A historical examination of issues in history. Topics will vary each time the course is offered. (Sufficient demand)

HIST 211 - American History I 4 credit hours. American history from Jamestown to the Civil War with particular attention to the political, social, and economic development of the new nation.

HIST 212 - American History II 4 credit hours. American life from the Civil War to the present with particular attention to the transformation from a rural to an urban society, movements for social reform, and the further extension of civil and political rights. Can be taken as a continuation of HIST 211 or may be taken independently.

HIST 300 - Topics in History/Non-American 1 to 4 credit hours. Studies of different non-American historical themes, with topics varying each time the course is given.

HIST 301 - America in War during the 20th Century 4 credit hours. With reference to both World Wars, Korea, Vietnam, and the Gulf War, the course addresses origins, strategy and leadership, political and social effects, and moral and legal issues including the army code of conduct, Hiroshima, the Nuremburg Trials, and Mylai. (Alternate years)

HIST 303 - The Civil War Era: 1830-1877 4 credit hours. A study of the War Between the States, including analyses of the political, social, economic, and ideological differences between the sections; the war and its aftermath; the historiography of the war: and an evaluation of the traditional view of the war as the "watershed" of American history. (Offered Alternate years)

HIST 307 - Post-World War II America 4 credit hours. This course is a historical survey of domestic events since World War II with particular attention to the fate of the New Deal, McCarthyism, the Kennedy legacy, the impact of Vietnam, and the civil rights and women's movements. (Cross-listed as SJST 307)

HIST 308 - Americans and Their Environments 4 credit hours. An inquiry into Americans' attitudes toward and relationships to environments they encounter and create, ca. 1600 - present. Topics include "Nature," industrialization, fine arts and architecture, government and citizen actions, and the impact of the U. S. on global resources.

HIST 309 - Israelis, Arabs and American Foreign Policy 2 credit hours. A historical survey of the Arab-Israeli conflict from the nineteenth-century beginnings of Zionism to the Second Intifada, with special attention to the role played by the USA.

HIST 310 - The Ancient Greeks 4 credit hours. The origins, growth and development of the Greek world from Mycenean through Hellenistic times (12th-1st centuries, B.C.E.),

with topics such as the Homeric myths, Sparta, Athens, democracy, the polis, the Hellenistic world. (Alternate years)

HIST 311 - The Roman World 4 credit hours. Rome from a river village to an empire (5th century B.C. - 3rd century A.D.), including its traditional origins, Etruscan control, republicanism, social conflict, imperialism, Julius Caesar, Antony and Cleopatra, Augustus and Nero, imperial life and livelihood. (Alternate years)

HIST 312 - Early Medieval Europe, 400-1050 4 credit hours. This course covers European history from the end of the Roman Empire to the beginning of feudal society. Through reading, lectures and discussions, students discover that the "Dark Ages" were actually filled with activity and innovation. (Alternate years)

HIST 321 - The History of Fascism 4 credit hours. This course is a study of the history of fascism. We examine the origins of fascist ideas and organizations; the varieties of fascist organizations and beliefs in Europe and European colonies; and the impact of fascism on politics and society before, during and after the Second World War. (Cross-listed as POLS 321)

HIST 322 - Churchill, Stalin, Roosevelt, Hitler 2 credit hours. A biographical approach to the Great Depression and World War II period.

HIST 324 - Queer American History 4 credit hours. What is queer history? Why write it? Who should be included? This course addresses the possible content and theoretical issues in the study of lesbian, gay, bisexual, and trans people in America since the seventeenth century. Prerequisite: sophomore standing or permission of instructor. (Cross-listed as WGST 324)

HIST 329 - Revolution and Culture: Hegel, Marx, Nietzsche 4 credit hours. An in-depth study of major texts by Hegel, Marx, and Nietzsche, with a thematic focus on the nature of historical change, the interpretation of history, and the relationship between material life and culture, including religion, philosophy, politics, and morality. (Cross-listed as PHIL 329, POLS 329)

HIST 358 - Modern China 4 credit hours. This course examines Chinese history of the past 200 years in a global context. It covers the end of the last imperial dynasty, Nationalist China under Chiang Kai-shek, the Japanese invasion of China during the Second World War, Mao Zedong’s establishment of the communist People's Republic of China, and the evolving place of China as a world power. Issues of current international importance involving China will also be discussed.

HIST 360 - Topics in History/American 1 to 4 credit hours. Studies of different American historical themes, with topics varying each time the course is given.

HIST 363 - Goths, Saxons, and Vikings: The Germanic Tribes from Roman Times to the Norman Conquest 4 credit hours. This course explores the history of the Germanic tribes, from their migration with other Indo-Europeans into Europe until the Norman Conquest of AD 1066. Their tribal lands once spread from the coast of Labrador to Russia and the Mediterranean. Central themes will be the interactions of these tribes with the Roman Empire and the changes Christianity brought to these tribes.

HIST 364 - Roman Britain 2 credit hours. A history of the Roman occupation of Britannia, beginning with the first contact with the Celts and ending with Rome's withdrawal from the island and the new period of domination by the Germanic Saxons,

Angles and Jutes. This course includes a 15-day study abroad component in England and Wales.

HIST 372 - America as a World Power, 1898-Present 4 credit hours. American diplomacy in the age of mass production, world wars, fascism and communism including close scrutiny of the conflict between isolationism and internationalism. (Alternate years)

HIST 377 - History of American Slavery 2 credit hours. A history of American slavery and race relations from the 17th century until emancipation. (Sufficient demand)

HIST 383 - The Nazi Holocaust 2 credit hours. This course will cover a number of topics, including German anti-Semitism and the means by which Hitler engineered the Final Solution. Half the course will focus on the Nazis, the other half on their victims. It concludes with a discussion of Holocaust "denial" and the nature of evil.

HIST 385 - Internship in History 1 to 4 credit hours. Internship under supervision. Available irregularly.

HIST 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

PHIL 101 - Introduction to Philosophy 4 credit hours. This course provides students who have had little or no acquaintance with philosophy with a workable knowledge of philosophical language and familiarity with its method.

PHIL 105 - Human Nature and the Cosmos: Western and non-Western Perspective 4 credit hours. Discussions of human nature and the nature of the cosmos are central to the philosophies and world views of all cultures. This introductory philosophy course is based on this recognition. Students read selected sources on and from Europe, the Mediterranean, Asia, Africa and the Americas.

PHIL 202 - The Meaning of Life 4 credit hours. In this course we look at how various thinkers and philosophical schools have tried to answer questions about what makes life meaningful.

PHIL 281 - Ethics 4 credit hours. An attempt to understand the fundamental human alternatives in the wake of the moral skepticism of our age. Traditional answers to the question "What is the good life?" will be examined by reading selected philosophers from Plato to Sartre.

PHIL 282 - Introduction to Logic 4 credit hours. Standard propositional logic, quantifier logic, and informal fallacies. Logical concepts are compared with some concepts of the English language. Discusses the nature of formal systems and emphasizes the development of proof techniques. Recommended for pre-law students.

PHIL 283 - Philosophy of the Arts I 4 credit hours. Conceptual analysis of the arts and what they reveal about human existence. Emphasis is placed on questions about creativity and meaning. Topics include representation and truth, expression, art and language, and the nature of cultural regularities. Special emphasis on the rise of modernism and formalism.

PHIL 300 - Topics in Philosophy 1 to 4 credit hours. Varying topics from year to year are selected from either the history of philosophy or contemporary philosophic problems. Prerequisite vary depending on the topic. (Sufficient demand)

PHIL 304 - Equality 2 credit hours. Equality is a core concept in contemporary philosophy and in discussions of social justice generally. In this course we discuss different kinds of equality: equality of opportunity, racial equality, sexual equality and political equality. Previous coursework in political science or philosophy is desirable but not required. (Cross-listed as POLS 304, SJST 304)

PHIL 305 - Chinese Philosophy 4 credit hours. What is virtue? Does good government flow from the character of leaders or is strict law enforcement all that is required? Alternatively, does our concern with society and government distract us from more important things? Is the concern for enlightenment inherently selfish? Readings in classical and more recent Chinese philosophy will help us grapple with these questions. Prerequisite: previous coursework in philosophy or religious studies, or permission of the instructor.

PHIL 306 - Personal Identity and the Self 2 credit hours. What constitutes a person's identity and what is the self? Does being the same person over time mean having the same body or is psychological continuity required? If it is psychological, then is it acquired and can it be lost? Finally, is there a self? What we learn from medical science, psychology and philosophy are brought together in this discussion. Prerequisite: previous course work in philosophy, psychology or permission of the instructor. (Cross-listed as PSYC 306)

PHIL 310 - Animal Consciousness 2 or 4 credit hours. This course is an examination of the nature of consciousness through discussion of the issues raised by the cognition and consciousness of non-human animals. Prerequisite: completion of at least one philosophy course or permission of instructor.

PHIL 311 - Greek Philosophy 4 credit hours. This course covers the history of Greek philosophy from the Presocratic through the Hellenistic period. Special emphasis is given to Plato and to Aristotle. (Cross-listed as POLS 311)

PHIL 312 - Philosophical Foundations of Modernity 4 credit hours. The intellectual foundations of our modern world were laid down in the 17th and 18th centuries by thinkers like Descartes, Locke, Hume, and Kant. In this course we will look at some of the great debate of the period having to do with science, religion, free will, the self, the nature of truth, the limits of knowledge, and the possibility of happiness.

PHIL 329 - Revolution and Culture: Hegel, Marx, Nietzsche 4 credit hours. An in-depth study of major texts by Hegel, Marx, and Nietzsche, with a thematic focus on the nature of historical change, the interpretation of history, and the relationship between material life and culture, including religion, philosophy, politics, and morality. (Cross-listed as HIST 329, POLS 329)

PHIL 383 - Philosophy of the Arts II 4 credit hours. Continued study of the question of meaning in art emphasizing the problem of interpretation. Models for criticism and contemporary debates about postmodern culture are examined. Topics include the relativity of interpretations, the role of styles and traditions, and the relationship of different artistic media to each other. Prerequisite: PHIL 283 or permission (Sufficient demand)

PHIL 388 - Topics in Metaphysics 2 to 4 credit hours. Metaphysical topics concern very basic questions about reality such as: How can things change and be the same? What constitutes personal identity? What is time? If the world is deterministic, can people be free? and, Does any kind of God exist? Prerequisite: completion of at least one philosophy course or permission of instructor. (Sufficient Demand)

PHIL 390 - Social and Political Philosophy Topics 2 or 4 credit hours. This course treats topics in social and political philosophy such as "Equality," "Freedom and Responsibility," "Freedom." Prerequisite: completion of at least one philosophy course or permission of instructor.

PHIL 400 - Topics in Philosophy 1 to 4 credit hours. Varying topics from year to year are selected from either the history of philosophy or contemporary philosophic problems. Prerequisite vary depending on the topic. (Sufficient demand)

PHIL 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

POLS 304 - Equality 2 credit hours. Equality is a core concept in contemporary philosophy and in discussions of social justice generally. In this course we discuss different kinds of equality: equality of opportunity, racial equality, sexual equality and political equality. Previous coursework in political science or philosophy is desirable but not required. (Cross-listed as PHIL 304, SJST 304)

POLS 321 - The History of Fascism 4 credit hours. This course is a study of the history of fascism. We examine the origins of fascist ideas and organizations; the varieties of fascist organizations and beliefs in Europe and European colonies; and the impact of fascism on politics and society before, during and after the Second World War. (Cross-listed as HIST 321)

POLS 329 - Revolution and Culture: Hegel, Marx, Nietzsche 4 credit hours. An in-depth study of major texts by Hegel, Marx, and Nietzsche, with a thematic focus on the nature of historical change, the interpretation of history, and the relationship between material life and culture, including religion, philosophy, politics, and morality. (Cross-listed as HIST 329, PHIL 329)

PSYC 306 - Personal Identity and the Self 2 credit hours. What constitutes a person’s identity and what is the self? Does being the same person over time mean having the same body or is psychological continuity required? If it is psychological, then is it acquired and can it be lost? Finally, is there a self? What we learn from medical science, psychology and philosophy are brought together in this discussion. Prerequisite: previous course work in philosophy, psychology or permission of the instructor. (Cross-listed as PHIL 306)

RLGS 105 - Introduction to Religions of the World 4 credit hours. An introduction to the study of religion through an examination of selected religious traditions (e.g., Christian, Jewish, Islamic, Hindu, Buddhist, Daoist, Yoruba). Attention is given to the experience, expression, and practice of religion in different historical and cultural contexts as well as to different theoretical approaches to the study of religion.

RLGS 165 - Asian Religions 4 credit hours. An introduction to selected Asian religious traditions (e.g., Hindu, Buddhist, Sikh, Shinto, Confucian, Daoist), with attention to their historical and contemporary contexts.

RLGS 200 - Topics in Religious Studies 1 to 4 credit hours. An examination of issues in religious studies. Topics vary each time the course is offered. (Sufficient demand)

RLGS 240 - Religion in America 4 credit hours. An examination of the impact of religion in shaping American culture. Major thinkers such as Edwards, James, Emerson and Niebuhr, historical movements such as revivalism and social gospel, and distinctive

themes such as religious pluralism, civil religion and ethnic awareness. (Sufficient demand)

RLGS 254 - Birth of the Christian Tradition 4 credit hours. An exploration of the early Christians' religious experience both by studying their writings (e.g., letters, gospels, apocalyptic discourses, theological treatises, liturgical manuals - some in the New Testament) and by examining the Jewish, Greek and Roman cultures from which Christianity emerged. (Offered: on demand)

RLGS 274 - Hindu Religious Traditions 4 credit hours. The third largest religion in the world, Hinduism includes a diversity of religious practices, communities, traditions, and beliefs. This course examines aspects of Hinduism from the Vedic period to the present day while introducing different approaches to the academic study of religion.

RLGS 300 - Topics in Religious Studies 1 to 4 credit hours. An examination of issues in religious studies. Topics vary each time the course is offered. (Sufficient demand)

RLGS 307 - Myth, Ritual, and the Creative Process 4 credit hours. A cross-cultural explanation of how people establish their world views by narrating stories and by acting out their deepest aspirations and beliefs. Special attention to how and why symbolic frameworks are transmuted from certain forms to others through creative imagination. Prerequisite: One course in Religious Studies or Philosophy, or permission of instructor. (Alternate years)

RLGS 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

SJST 304 - Equality 2 credit hours. Equality is a core concept in contemporary philosophy and in discussions of social justice generally. In this course we discuss different kinds of equality: equality of opportunity, racial equality, sexual equality and political equality. Previous coursework in political science or philosophy is desirable but not required. (Cross-listed as PHIL 304, POLS 304)

SJST 307 - Post-World War II America 4 credit hours. This course is a historical survey of domestic events since World War II with particular attention to the fate of the New Deal, McCarthyism, the Kennedy legacy, the impact of Vietnam, and the civil rights and women's movements. (Cross-listed as HIST 307)

WGST 324 - Queer American History 4 credit hours. What is queer history? Why write it? Who should be included? This course addresses the possible content and theoretical issues in the study of lesbian, gay, bisexual, and trans people in America since the seventeenth century. Prerequisite: sophomore standing or permission of instructor. (Cross-listed as HIST 324)

Mathematics

MATH 100 - Special Topics in Mathematics 1 to 4 credit hours.

MATH 101 - Communicating with Numbers 4 credit hours. Topics include ratios and proportions, proportionality as distinct from proportions, constant of proportionality, rates, percentages, total change vs. percent change, and handling data.

MATH 102 - Mathematics for Teachers: Grades K-6 4 credit hours. This is a content course for those preparing to teach Kindergarten through Grade 6. This course prepares candidates with the knowledge base to teach math in accordance with

the State learning standards as prescribed by NYSED regulations. Topics include: Mathematical language and vocabulary, equivalent forms, mathematical equations, graphing and diagrams.

MATH 104 - Quantitative Methods for Business 4 credit hours. An introduction to the quantitative methods needed by students in business-related majors. Topics covered include equations and graphs, functions, and systems of equations.

MATH 131 - Discrete Mathematics 4 credit hours. An introduction to a variety of mathematical concepts and tools which are of particular use in computer science. Topics include logic and sets, relations and functions, graphs, combinatorics and Boolean algebra.

MATH 151 - Calculus I 4 credit hours. An introduction to differentiation and integration of functions of a single variable, with applications. Four years of college preparatory mathematics strongly recommended. Instructor permission required for students with credit in MATH 152.

MATH 152 - Calculus II 4 credit hours. A continuation of single variable calculus including transcendental functions, methods of integration, and series. Prerequisite MATH 151. Instructor permission required for students with credit in MATH 253.

MATH 200 - Topics in Mathematics 1 to 4 credit hours. Special topics in mathematics which vary from year to year. (Sufficient demand)

MATH 231 - Introduction to Data Science 4 credit hours. Students are introduced to the central ideas used in data science. Topics include supervised and unsupervised algorithms in regression, classification, and clustering problems; probabilistic results such as bias-variance trade-off and sampling variability; and ensemble methods. Concepts are explored and interpreted using a common statistical programming language such as Python or R. Prerequisite: MATH 151. (Offered Spring; odd years)

MATH 250 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Written Plan of Study required. Open to qualified students.

MATH 253 - Calculus III 4 credit hours. Multivariate calculus, derivatives and integrals of vector functions with Stoke's and Green's theorems. Prerequisite: MATH 152.

MATH 271 - Differential Equations 3 credit hours. Ordinary differential equations with applications to the sciences. Prerequisite: MATH 253.

MATH 281 - Foundations of Higher Mathematics 4 credit hours. An introduction to logic and proof: Topics include sets, symbolic and predicate logic, inductions, and cardinality. Prerequisite: MATH 253.

MATH 305 - Theory of Computation 4 credit hours. This course studies computational theory in the context of theoretical computer science and mathematics. Topics include finite automata and languages, computability and Turing machines, decidability and incompleteness theorems. Prerequisite: MATH 281. (Cross-listed as CSCI 305) (Offered Fall, odd years)

MATH 331 - Mathematics from a Historical Perspective 3 or 4 credit hours. This course explores a wide variety of topics in the history of mathematics, from the development of numeral systems to the structure of the modern mathematical community. Many of these topics are explored through the many heroes of mathematics. Prerequisite: MATH 253; ENGL 102 or ENGR 110.

MATH 351 - Introduction to Operations Research 4 credit hours. Optimization techniques with application to decision making. Linear programming and other topics, e.g., network analysis, dynamic programming, game theory, stochastic processes, queueing theory.

MATH 361 - Complex Variables 4 credit hours. An introduction to the algebra and geometry of complex numbers, calculus of analytic functions, Cauchy-Riemann equations, complex integration, Cauchy integral formula, and residues. Prerequisite: MATH 253

MATH 371 - Linear Algebra 4 credit hours. The concepts of vector space, independence, basis and linear transformations, with applications to systems of linear equations, eigenvalue problems and bilinear and quadratic forms. Prerequisite: MATH 253.

MATH 381 - Mathematical Statistics 4 credit hours. The theoretical basis for statistics including probability, random variables, expectation, a curve of important probability distributions, sums of independent random variables, and confidence intervals. Prerequisite: MATH 253.

MATH 382 - Actuarial Exam Preparation 1 credit hours. The content includes definitions and applications in risk management and insurance using calculus-based probability theory. Taken in preparation for the Society of Actuaries Exam P/Casualty Actuarial Society Course 1 exam. Corequisite: MATH 391.

MATH 391 - Statistical Methods 3 credit hours. This course introduces statistical inference and is a study of different methods of statistical estimation and tests of statistical hypotheses. Prerequisite: MATH 381.

MATH 400 - Topics in Mathematics 1 to 4 credit hours. Special topics in mathematics which vary from year to year. (Sufficient demand)

MATH 401 - Advanced Engineering Mathematics 4 credit hours. Fundamental concepts of applied analysis including Fourier series and integrals, Laplace transforms, partial differential equations and boundary value problems and special functions. Prerequisite: MATH 271.

MATH 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required, which must include the student reading and producing proofs. Open to qualified third and fourth year students, MATH 450 is required of all candidates for departmental honors.

MATH 461 - Geometry 4 credit hours. An introduction to both Euclidian and non-Euclidian geometry, with emphasis on the axiomatic method and its place in the current secondary mathematics curriculum. Prerequisite: MATH 253.

MATH 481 - Modern Algebra 4 credit hours. The fundamental structures and techniques of algebra including topics such as groups, rings, fields, quotient structures, theory of equations and polynomials. Prerequisite: MATH 281.

MATH 491 - Advanced Calculus 4 credit hours. Elements of real function theory including some notions from logic, the topology of the real line, continuity, uniform continuity, differentiation and limits of sequences. Prerequisite: MATH 281.

Modern Languages

CHIN 101 - Chinese I 4 credit hours. This course is an introduction to the Mandarin Chinese language and cultures of the People's Republic of China.

CHIN 102 - Chinese II 4 credit hours. The further development of basic language skills introduced in CHIN 101. A continuation of the study of the cultures of the People's Republic of China. Prerequisite: CHIN 101 or permission of the instructor.

CHIN 200 - Special Topics 1 to 4 credit hours. Content varies. Prerequisite: CHIN 102 or permission of instructor.

CHIN 201 - Chinese III 4 credit hours. In this course students continue development of Chinese language skills, with attention to listening, speaking, reading and writing Mandarin. Students become more familiar with Chinese characters and gain a deeper understanding of China, its people and cultures. Prerequisite: CHIN 102 or permission of instructor.

CHIN 202 - Chinese IV 4 credit hours. This course is the next phase for students who have completed CHIN 201. It continues in the strengthening of students' knowledge of and proficiency in Chinese. It enhances students' oral expression, reading comprehension, and cultural understanding. Prerequisite: CHIN 201.

CHIN 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

FREN 101 - French I 4 credit hours. Introduction to the language and culture of the French-speaking world; speaking, reading, understanding and writing. Practice in language lab. Emphasis on communicative skills. Assumes no prior knowledge of the language. Not open to students with credit in FREN 102 or equivalent.

FREN 102 - French II 4 credit hours. This course builds on French I, increasing students' communicative skills and exploration of French-speaking cultures. Students improve their proficiency in speaking, listening, writing and reading French through engaging in class activities, in the language lab and with independent work. Students learn to perform practical tasks like ordering in restaurants, dressing, visiting others, and making living arrangements. Prerequisite: FREN 101, a score of 201 – 400 on French Language Placement Exam, or permission of instructor.

FREN 200 - Special Topics 1 to 4 credit hours. Content varies. Prerequisite: FREN 102, a score of 401 or higher on French Language Placement Exam, or permission of instructor.

FREN 201 - Intermediate French III 4 credit hours. Continuation and further development of the skills learned in FREN 102. Students in FREN 201 will be able to understand the main points of clear standard input on familiar matters regularly encountered in work, school, leisure, etc.; deal with most situations likely to arise while traveling in an area where the language is spoken; produce simple text on topics that are familiar or of personal interest; and describe experiences and events, dreams, hopes and ambitions and briefly give reasons and explanations for opinions and plans. Increase focus on reading proficiency and more in-depth knowledge of the Francophone world. Prerequisite: FREN 102, a score of 401 or above on French Language Placement Exam, or permission of instructor.

FREN 202 - Intermediate French IV 4 credit hours. Continuation and further development of the skills learned in FREN 201. Students in FREN 202 will be able to understand the main ideas of texts on both concrete and abstract topics, including technical discussions in their field of specialization; interact with increased fluency and spontaneity with native speakers; write clearly and accurately about a wide range of subjects. Continued exposure to the history and cultures of the Francophone world. Prerequisite: FREN 201 or permission of instructor.

FREN 210 - Global Perspectives: Paris 2 credit hours. This course enables students to develop an understanding and appreciation of another culture, first in the classroom, and then two weeks in Paris. The focus is on history, art, and contemporary culture. Open to all students. (Cross-listed as ARTH 210, GLBS 210)

FREN 300 - Special Topics 1 to 4 credit hours.

FREN 302 - Advanced French Grammar and Composition I 4 credit hours. An analysis of the grammatical structure of the French language with emphasis on the more complex problems in French syntax and usage, followed by practice in composition. The course is conducted in French. Prerequisite: FREN 202 or permission of instructor. (Alternate years)

FREN 305 - French Pronunciation and Phonetics 2 credit hours. This course focuses on oral proficiency and listening comprehension, as well as French phonetics. Students gain a better understanding of the phonetic structure of French and improve all aspects of their pronunciation, including intonation, phrasing, syllable structure and stylistic interpretation. Prerequisite: FREN 201.

FREN 311 - French Literature I 4 credit hours. A historical-critical view of French literature from the Middle Ages through the 18th century. Readings from anthologies and selected complete texts from each period. Discussion and reading in French. Prerequisite: FREN 310 or permission of instructor.

FREN 400 - Special Topics in French 1 to 4 credit hours. Content varies from year to year with topics such as French Women's Literature and Feminist Theory, Bilingualism in Quebec, Medieval French Literature, Ethnic Minorities in France, Caribbean French Culture. The course is conducted in French. Prerequisite: FREN 310 or permission of instructor.

FREN 420 - The Art of French Translation 4 credit hours. Intensive practice in translation from French to English, and from English to French. Current nonfiction, fiction, periodicals, and newspapers are materials for translation. The course is conducted in French. Prerequisite: FREN 303.

FREN 450 - Independent Study 1 to 4 credit hours. For students with a particular interest in an aspect of French language or literature not covered in any established course. Approved Plan of Study required.

FREN 485 - Internship in French 1 to 4 credit hours. An off-campus project in consultation with faculty in the Division of Modern Languages. Students gain experience in a variety of careers involving French and related fields. The internship must be conducted in French. Requirements for this project include a journal, job evaluations, and a final report. May be taken during the summer or semester abroad. FREN 202 or equivalent proficiency recommended.

FREN 490 - Modern Languages Senior Seminar 0 credit hours. In this seminar students have the opportunity to complete their electronic portfolio and prepare for an

oral defense. In consultation with professors and peers, students select the documents to include in keeping with portfolio requirements. As part of this seminar, students write and revise their Senior Reflective Statement and their resume or curriculum vitae.

GLBS 210 - Global Perspectives: Paris 2 credit hours. This course enables students to develop an understanding and appreciation of another culture, first in the classroom, and then two weeks in Paris. The focus is on history, art, and contemporary culture. Open to all students. (Cross-listed as ARTH 210, FREN 210)

GLBS 213 - Speaking the Unspeakable: Argentina's Literature of Dictatorship 4 credit hours. This course introduces literary representations of state violence and resistance during the Argentine military dictatorship of the 1970s and 1980s. We engage in close readings of a variety of literary genres, including novels, short stories, autobiography, and testimonial literature. We combine literary readings with study of historical and theoretical texts in order to deepen our understanding of state terrorism, resistance, trauma, memory, and justice. The course is conducted in English, including the readings and films. (Cross-listed as SJST 213, SPAN 213)

GRMN 101 - German I 4 credit hours. Introduction to the language and culture of the German-speaking world. Development of skills in speaking, reading, understanding and writing. Emphasis on communicative skills. Assumes no prior knowledge of the language. Not open to students with credit in GRMN 102 or the equivalent.

GRMN 102 - German II 4 credit hours. This course builds on German I, increasing students' communicative skills and exploration of German-speaking cultures. Students improve their proficiency in speaking, listening, writing and reading German through engaging in class activities and with independent work. Prerequisite: GRMN 101, a score of 201-400 on German Language Placement Exam, or permission of instructor.

GRMN 200 - Special Topics in German 1 to 4 credit hours. This course will have varying topics each time the course is offered.

GRMN 400 - Special Topics 1 to 4 credit hours. This course will have varying topics each time the course is offered.

GRMN 450 - Independent Study 1 to 4 credit hours. For students with a particular interest in an aspect of German language, culture or literature not covered in any established course. A 4-hour independent study is required of German majors. Approved Plan of Study required.

GRMN 485 - Internship in German 1 to 4 credit hours. An off-campus project in consultation with faculty in the Division of Modern Languages. Students gain experience in a variety of careers involving German and related fields. The internship must be conducted in German. Requirements for this project include a journal, job evaluations, and a final report. May be taken during the summer or semester abroad. GRMN 202 or equivalent proficiency recommended.

ITAL 101 - Italian I 4 credit hours. Introduction to the language and culture of the Italian-speaking world; speaking, reading, understanding, and writing. Practice in language lab. Emphasis on communicative skills. Assumes no prior knowledge of the language. Offered upon availability of instructor. Not open to students with credit in ITAL 102 or the equivalent. (Offered on demand)

ITAL 102 - Italian II 4 credit hours. This course builds on Italian I, increasing students' communicative skills and exploration of Italian-speaking cultures. Students improve their proficiency in speaking, listening, writing and reading Italian through engaging

in class activities, in the language lab and with independent work. Students learn to perform practical tasks like ordering in restaurants, dressing, visiting others, and making living arrangements. Prerequisite: ITAL 101 or permission of instructor. Offered upon availability of instructor. (Offered on demand.)

ITAL 200 - Special Topics in Italian 1 to 4 credit hours. Content varies from year to year. Prerequisite: ITAL 102 or permission of instructor.

ITAL 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

LATN 101 - Latin I 4 credit hours. This course is an introduction to Classical Latin. Short reading passages introduce students to the culture of the early Roman Empire and basic grammar. Simple exercises in pronunciation and spoken Latin are included. This course examines the influence of Latin on English and of the ancient Roman world on our own.

LATN 102 - Latin II 4 credit hours. This course builds on introductory Latin I. Students explore the history and cultures of the Roman Empire as well as the roots of English. Students improve their proficiency in reading and writing Latin through engaging in class activities and independent work. Prerequisite: LATN 101 or permission of instructor.

LATN 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

SJST 213 - Speaking the Unspeakable: Argentina's Literature of Dictatorship 4 credit hours. This course introduces literary representations of state violence and resistance during the Argentine military dictatorship of the 1970s and 1980s. We engage in close readings of a variety of literary genres, including novels, short stories, autobiography, and testimonial literature. We combine literary readings with study of historical and theoretical texts in order to deepen our understanding of state terrorism, resistance, trauma, memory, and justice. The course is conducted in English, including the readings and films. (Cross-listed as GLBS 213, SPAN 213)

SJST 217 - Exiled from Justice: Equatorial Guinean Writers in Africa and Spain 4 credit hours. Students explore Equatorial Guinea’s literature in the context of its colonial relationship to Spain and its postcolonial position in Africa. Students study the history of Equatorial Guinea, located on the central west African coast, as well as the impact of its wealth of petroleum on development since independence from Spain in 1968.The writers and artists of Equatorial Guinea, residing either in Africa, Spain, or Latin America, create and challenge the definitions of Guineidad as they advocate for justice and a return to a homeland whether literal or metaphorical. Spanish majors/ minors will complete some readings in Spanish and complete written work in Spanish. Class is conducted in English. Readings are all available in English. (Cross-listed as SPAN 217)

SPAN 101 - Spanish I 4 credit hours. Introduction to the language and culture of the Spanish-speaking world: speaking, reading, understanding and writing. Practice in language lab. Emphasis on communicative skills. Assumes no prior knowledge of the language. Not open to students with credit in SPAN 102 or the equivalent.

SPAN 102 - Introductory Spanish II 4 credit hours. This course builds on Introductory Spanish I, increasing students' communicative skills and exploration of Spanish-speaking cultures. Students improve their proficiency in speaking, listening, writing

and reading Spanish through engaging in class activities, in the language lab and with independent work. Students learn to perform practical tasks like ordering in restaurants, dressing, visiting others, and making living arrangements. Prerequisite: SPAN 101, a score of 201 – 400 on Spanish Language Placement Exam, or permission of instructor.

SPAN 200 - Special Topics 1 to 4 credit hours. Subject matter not covered in other courses. Topics vary from one semester to another.

SPAN 201 - Intermediate Spanish III 4 credit hours. Students integrate and expand on structures and vocabulary, developing cultural awareness through literature, video and online materials. Participation in three weekly classes with their professor and one weekly conversation group with an international teaching assistant increases students' language skills proficiency. Prerequisite: SPAN 102, , a score of 401 or above on Spanish language Placement Exam, or permission of instructor. (Every fall semester)

SPAN 202 - Intermediate Spanish IV 4 credit hours. 5Students complete their integration of basic structures and vocabulary, increasing cultural understandings through literature, video and online materials. Participation in three weekly classes with their professor and one weekly discussion group with an international T.A. develops students' oral and written expression. This course may be taken as the elective for the Spanish minor. Prerequisite: SPAN 201 or permission of instructor. (Every spring semester)

SPAN 213 - Speaking the Unspeakable: Argentina's Literature of Dictatorship 4 credit hours. This course introduces literary representations of state violence and resistance during the Argentine military dictatorship of the 1970s and 1980s. We engage in close readings of a variety of literary genres, including novels, short stories, autobiography, and testimonial literature. We combine literary readings with study of historical and theoretical texts in order to deepen our understanding of state terrorism, resistance, trauma, memory, and justice. The course is conducted in English, including the readings and films. (Cross-listed as GLBS 213, SJST 213)

SPAN 217 - Exiled from Justice: Equatorial Guinean Writers in Africa and Spain 4 credit hours. Students explore Equatorial Guinea’s literature in the context of its colonial relationship to Spain and its postcolonial position in Africa. Students study the history of Equatorial Guinea, located on the central west African coast, as well as the impact of its wealth of petroleum on development since independence from Spain in 1968.The writers and artists of Equatorial Guinea, residing either in Africa, Spain, or Latin America, create and challenge the definitions of Guineidad as they advocate for justice and a return to a homeland whether literal or metaphorical. Spanish majors/ minors will complete some readings in Spanish and complete written work in Spanish. Class is conducted in English. Readings are all available in English. (Cross-listed as SJST 217)

SPAN 218 - The Bombs and Ballots of Basque Literature in Spain 4 credit hours. This course explores Basque cultural production in the context of Basque nationalist terrorism in Spain. The political context of this parliamentary monarchy and the history of ETA, the Basque nationalist terrorist organization, frames the close reading of Basque poems, short stories, movies and a novel. Does this cultural production provide for its readers the definition of the contemporary Basque nation?

SPAN 220 - Literatura Infantil y Juvenil 4 credit hours. This course provides multiple approaches to the literary production for children and young adults in Spain. Students acquire the tools for potential teaching uses of literature written for a younger target

audience. The social and cultural contexts of the included works create the foundation for our study. Students develop the critical thinking skills necessary for expression of their analyses of the texts they read. Children's and Young Adult Literature of Spain is taught in entirely Spanish with a limited number of bilingual and/or English readings.

SPAN 221 - Accelerated Spanish-Heritage 4 credit hours. The course is intended for students who are heritage-speaker learners to further develop their communicative competence. The course combines sociocultural uses of language, dialectal variation and pragmatic, situational contexts to challenge students to excel. The highly intensive pace of the course promotes rapid language acquisition and helps students to advance faster to 300- and 400-level Spanish courses.

SPAN 300 - Special Topics 1 to 4 credit hours. Subject matter not covered in other courses. Topics vary from one semester to another.

SPAN 301 - Advanced Conversation and Composition 4 credit hours. In this workshop-style course, students practice the styles and mechanics of writing and speaking in academic, professional, and informal contexts. Authentic Hispanic cultural materials are the basis for students¿ essays, speeches, and informal conversation. This course is required for the Spanish major and minor. Prerequisite: SPAN 202 or permission of instructor. (Every fall semester)

SPAN 311 - Peninsular Culture and Literature I: Medieval - Eighteenth Century 4 credit hours. An introduction to canonical cultural works of Spain from the Middle Ages through the eighteenth century. Cultural discourse placed in context with socio-historical periods. Essays, literature, videos and/or films. Predominantly in Spanish.(Alternate years)

SPAN 312 - Peninsular Culture and Literature II: 19th - 20th Century 4 credit hours. An introduction to canonical cultural works of nineteenth-and twentieth-century Spain. Cultural discourse placed in context with socio-historical periods. Can be taken independently or as a continuation of SPAN 311. Course components predominantly in Spanish. (Alternate years)

SPAN 315 - Latin American Culture and Literature I 4 credit hours. Students are introduced to Latin American culture and literature through analysis of art, architecture, and original texts from the pre-Colombian period to 1900. Films and historical readings enhance students' understanding of indigenous and Hispanic cultures, art, and politics in Latin America. The course is conducted in Spanish and may be taken as one of the core courses for the Spanish major and minor. (Alternate fall semesters)

SPAN 316 - Latin American Culture and Literature II 4 credit hours. Students are introduced to Latin American culture and literature through analysis of original texts from 1900 through the present. Films and historical readings facilitate students' engagement with literature in its socio-historical context, as well as enhancing students' ability to make connections between artistic and political movements. This course is conducted in Spanish and may be taken as one of the core courses for the Spanish major and minor. (Alternate spring semesters)

SPAN 360 - Literary Theory Seminar 4 credit hours. This course is intended to introduce students with a major or a minor in a foreign literature and language to Literary Theory and Criticism. Students use different types of theory to analyze texts in English and in their target language. This course is required of all foreign language and literature majors and is recommended for those students with a minor in a foreign language. Prerequisite: SPAN 202 or permission of instructor.

SPAN 400 - Topics in Hispanic Literature 1 to 4 credit hours. A study of the literary manifestations of socio-cultural areas such as religion, honor, love, politics, and individuality which are of concern to Hispanics. Taught in Spanish. (Sufficient demand.)

SPAN 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Independent study is required of Spanish majors. Approved Plan of Study required.

SPAN 485 - Internship in Spanish 1 to 4 credit hours. An off-campus project in consultation with faculty in the Division of Modern Languages. Students gain experience in a variety of careers involving Spanish and related fields. The internship must be conducted in Spanish. Requirements for this project include a journal, job evaluations, and a final report. May be taken during the summer or semester abroad. SPAN 202 or equivalent proficiency recommended.

SPAN 490 - Modern Languages Senior Seminar 0 credit hours. In this seminar students have the opportunity to complete their electronic portfolio and prepare for an oral defense. In consultation with professors and peers, students select the documents to include in keeping with portfolio requirements. As part of this seminar, students write and revise their Senior Reflective Statement and their resume or curriculum vitae.

Physics and Astronomy

ASTR 103 - Introductory Astronomy 4 credit hours. This course is a general survey of astronomy including our solar system, the nature of stars, the structure of galaxies, and cosmology, including the nature of Dark Matter and Dark Energy.

ASTR 107 - Elementary Astronomy Lab 2 credit hours. Observation, supplemented by discussion of topics such as types of telescopes and auxiliary equipment, use of the Observatory, celestial coordinates and the use of reference materials, astronomical photography.

ASTR 200 - Special Topics in Astronomy 1 to 4 credit hours. Topics vary from year to year. (Sufficient demand)

ASTR 302 - Planetary Science 2 credit hours. A quantitative and comparative study of the planets, moons and small bodies of the Solar System, this course includes the physics of the interiors, surfaces, and atmospheres of the terrestrial planets/moons, and of the atmospheres and rings of the Jovian planets. Also includes the physics of planetary formation and the latest findings of probes currently exploring the Solar System. Prerequisite: One year of college level physics. (Sufficient demand)

ASTR 303 - Stellar Astronomy 3 credit hours. Part of an astronomy sequence recommended for students in the physical sciences and area science teachers. Emphasis on the observational and theoretical basis for understanding stellar structure and evolution, beginning with the Sun. Prerequisite: One year of college level physics and MATH 151. (Sufficient demand)

ASTR 304 - Galactic Astronomy and Cosmology 4 credit hours. Part of an astronomy sequence recommended for students in the physical sciences and area science teachers. Emphasis on the observational and theoretical basis of our knowledge of the Universe on the large scale. Topics include the structure of the Milky Way Galaxy, active and passive galaxies, and Cosmology. Prerequisite: One year of college level physics and MATH 151. (Sufficient demand)

ASTR 307 - Observational Astronomy 2 credit hours. An introduction to astronomical observing techniques and data reduction. Emphasis placed on image acquisition and manipulation to determine things like the morphologies, distances, motions, and luminosities of various objects. This course is intended for students with interest in astronomy and some background in physics and mathematics. Prerequisite: One semester of college level physics; pre-or co-requisite: MATH 151. (Sufficient demand)

ASTR 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

PHYS 111 - Introductory General Physics I 4 credit hours. A lecture and laboratory course which includes mechanics, wave motion and sound, fluids and heat. Calculus is not used but some knowledge of algebra and trigonometry is assumed.

PHYS 112 - Introductory General Physics II 4 credit hours. A lecture and laboratory course including electricity and magnetism, optics, and some modern physics. Calculus is not used but some knowledge of algebra and trigonometry is assumed. Prerequisite: PHYS 111 or PHYS 125.

PHYS 125 - Physics I 4 credit hours. A calculus-based lecture and laboratory course which includes one and two dimensional kinematics and dynamics, the work energy theorem, conservation of energy, the impulse momentum theorem, conservation of momentum, rotational and simple harmonic motion and gravitation. Prerequisite: MATH 151.

PHYS 126 - Physics II 4 credit hours. This calculus-based lecture and laboratory course includes electric field and potential, direct and alternating current circuits, magnetism and magnetic induction and an introduction to electromagnetic and other waves. Prerequisite: MATH 152 and PHYS 125.

PHYS 200 - Special Topics in Physics 1 to 4 credit hours. Topics vary from year to year and are designed especially for, but not limited to, non-science majors. Typical topics might be light and color, music and sound; or laboratory topics to include aspects of physics of interest to artists, musicians, photographers, environmentalists, etc. (Sufficient demand)

PHYS 201 - Computing in the Physical Sciences 3 credit hours. In this course students apply computer programming, logic, and/or modeling software to physical problems. Depending on the instructor or semester, various languages or modeling packages will be used. The emphasis is on the flow of logic and on how computers can be used to answer questions that cannot be answered in other ways. Prerequisite: PHYS 125/126.

PHYS 325 - Elementary Optics 3 credit hours. This course discusses geometrical and wave optics with special emphasis on optical instruments. Prerequisite: MATH 253, PHYS 126.

PHYS 326 - Elementary Modern Physics 3 credit hours. This course includes basic relativity, quantum and waves aspects of radiation and particles, atomic structure, and an introduction to nuclear physics properties. Prerequisite: MATH 253, PHYS 126.

PHYS 327 - Computational Physics 3 credit hours. Numerical methods are an essential element of any modern physics curriculum. This course is concerned with developing the most frequently employed numerical methods for solving differential equations and carrying out complex integrations. Special emphasis will be given to

problems associated with quantum mechanics. Prerequisite PHYS 326 or CEMS 344 or permission of instructor.

PHYS 341 - Advanced Physics Laboratory 2 credit hours. A laboratory course involving experiments in mechanics, acoustics, heat, optics, electricity, and magnetism, electronics and atomic and nuclear physics. Prerequisite: PHYS 126.

PHYS 400 - Special Topics 1 to 4 credit hours. Topics vary from year to year and are designed especially for, but not limited to, non-science majors. Typical topics might be light and color, music and sound; or laboratory topics to include aspects of physics of interest to artists, musicians, photographers, environmentalists, etc. (Sufficient demand)

PHYS 401 - Quantum Mechanics I 4 credit hours. This course presents Schrodinger's theory of quantum mechanics with applications to atomic systems. Includes origin of the quantum theory, wave-particle duality, approximation methods, and time-dependent problems. Prerequisite: MATH 271, PHYS 326. (Offered on demand)

PHYS 402 - Quantum Mechanics II 4 credit hours. Continuation of Quantum Mechanics I. Focuses on the applications of quantum mechanics postulates to real systems. Time independent perturbation theory is developed as are nonperturbative techniques such as variational theory. These ideas are applied to real atoms, molecules, metals, etc. Time dependent perturbation is also constructed and applied to electrodynamics. Non relativistic quantum electrodynamics is then applied to realistic systems. Prerequisite: PHYS 401.

PHYS 405 - General Relativity 4 credit hours. We start with an extensive review of special relativity, followed by a detailed development of differential geometry which is the mathematics of the Einstein equations. The Einstein equations are then applied to such classic problems as the deflection of light by stars, the precession of the perihelion of mercury, the behavior of static and rotating black holes, and cosmology. Prerequisite: PHYS 326.

PHYS 408 - Physics of Glass 4 credit hours. This class is a rigorous introduction to the physical principles and concepts behind glass. The role of the structure function and the pair distribution function in determining the structure of glass is examined. Viscoelastic theory and relaxation behavior are studied The thermodynamics of glass transition are examined using energy and enthalpy landscapes as well as temperature dependent constraint theory. Prerequisite: PHYS 125/126 and MATH 271. (Offered on demand)

PHYS 410 - Particle Physics 4 credit hours. Local gauge invariance is applied to the quantum theories of electrodynamics, strong, and weak V-A interactions. The Feynman rules and diagrams for these interactions are developed with a strong emphasis placed on the calculation of cross sections. The unification of electromagnetism and weak interactions into electroweak theory is developed and used to calculate cross sections. The important role that spontaneous symmetry breaking and the Higg's mechanism play in particle physics is developed in detail. Prerequisite: PHYS 401.

PHYS 421 - Statistical Mechanics 4 credit hours. This course deals with the various aspects of macroscopic thermodynamics and describes these statistically in terms of the microstates of systems. Examples taken mainly from gaseous and solid systems. Prerequisite: MATH 253, PHYS 326 or permission of instructor. (Offered on demand)

PHYS 423 - Classical Mechanics 4 credit hours. This course makes more sophisticated use of the basic laws of mechanics and includes sections on rotating coordinate systems, orbits in inverse square law fields, the analysis of vibrating systems and waves, Lagrange's and Hamilton's equations, and an introduction to the topic of

chaos. Prerequisite: MATH 271, PHYS 326 or permission of instructor. (Offered on demand)

PHYS 424 - Electricity and Magnetism I 4 credit hours. A study of electric and magnetic fields and their origins in free space as well as in materials. Includes an introduction to vector calculus, solutions to Laplace's equation, multiple expansions, and Maxwell's equations in differential and integral form. Prerequisite: MATH 271, PHYS 326 or permission of instructor. (Offered on demand)

PHYS 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

PHYS 454 - Advanced Electricity and Magnetism II 4 credit hours. The electromagnetic Lagrangian, as well as the Lagrangian density, is developed. The relativistic transformation equations for the electromagnetic fields are derived and applied. Electromagnetic radiation is examined as are wave guides. Prerequisite: PHYS 424. (Offered on demand)

SCIE 110 - Weather Elements 2 credit hours. Analyzes the fundamental physical processes of the atmosphere and their relationships to the daily weather pattern and weather forecasting in the United States. May be taken for science credit. (Sufficient demand)

SCIE 111 - Science in Science Fiction 2 or 4 credit hours. Science fiction is intimately connected with science. In the sub-genre of hard science fiction, the story is founded on sound scientific or technological extrapolations and explores how individuals and society react to the changes. This course will look at the science used in a variety of short stories, novels and films. Topics can include planetary science, genetic engineering, artificial intelligence, celestial mechanics, black holes, chemistry, physics, and ecology.

SCIE 115 - Life in the Universe 4 credit hours. In this course, we take a look at the past and future of astrobiology. Issues covered include how we discovered our physical place in the universe, the origins of life and intelligent life, the physical and chemical conditions need for life as we know it, and where we can find those conditions in the solar system and beyond.

SCIE 117 - Integrated Science 4 credit hours. Content-based survey of the Physical Setting Core Curriculum for Elementary (K-4) and Intermediate (5-8) Level Science, emphasizing the chemical and physical laws that describe our surroundings and the interactions of inanimate environmental components. Illustrates chemistry and physics concepts with real-world examples and links them with earth science, numeracy, and art as reinforced by the associated inquiry-based laboratory addressing the complementary Process Skills. Includes modern methods of acquiring, analyzing, modeling/interpreting, and communicating data from the physical sciences. Manipulatives, models, and experiments for understanding physical properties and chemical structure are featured in the hands-on laboratory. Prerequisite: Major or minor in education; others by permission of instructor.

SCIE 200 - Special Topics in Science 1 to 4 credit hours. Topics vary from year to year.

SCIE 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

Psychology & Comm Studies

BIPY 485 - Practicum or Internship 1 to 4 credit hours.

BIPY 499 - Thesis 1 to 4 credit hours.

COMM 100 - Topics in Communication 1 to 4 credit hours. This course provides opportunities for examining communication studies areas not covered in the regular offerings. Topics vary each semester.

COMM 101 - Introduction to Communication Studies 4 credit hours. An introduction to communication studies in a variety of contexts: intrapersonal, interpersonal, small group, and public speaking. The class improves the student's understanding of communication as a process and facilitates day-to-day interactions.

COMM 110 - Mass Media and American Life 4 credit hours. An examination of the evolution of American mass media and their cultural, economic, and social implications. Students analyze varied media vehicles (including newspapers, books, magazines, sound recordings, films, and television programs) with regard to content, form, and demographic impact.

COMM 200 - Special Topics in Communication 1 to 4 credit hours. This course provides opportunities for examining communication studies areas not covered in the regular offerings. Topics vary each semester.

COMM 205 - Introductory Newswriting and Reporting 4 credit hours. An introductory journalism course emphasizing news gathering and reporting a variety of basic news stories, including hard news, features, and enterprise stories. Basic newswriting skills covered, including developing news judgment, style, structure, sources, and interviewing techniques.

COMM 210 - Interpersonal Communication 4 credit hours. This course is designed to increase students' awareness of interpersonal communication theories, practices, and impact.

COMM 215 - Introduction to Film Studies 4 credit hours. Learn how to "read" a film, rather than simply "watch" a film. This course is an examination of fundamental film techniques and basic methods of film analysis. Students engage with core concepts like genre, cinematography, directors, star culture, documentaries, special effects, and cinema's place in the 21st century. (Offered Fall, every year)

COMM 216 - Video Production 4 credit hours. This course offers an introduction to basic video production techniques and processes allowing for the creation of group-based projects. The main focus of the course is practical, affording students an opportunity inside and outside of class to produce dramatic and non-fiction original works. (Offered on demand)

COMM 217 - Social Media and Society 4 credit hours. This course examines the relationship between digital media and society. In particular, we examine various social media (Instagram, Facebook, Twitter, YouTube, etc.) from a cultural perspective with emphasis on the construction of social relationships and identities while also providing students a practical "users manual" for the 21st century technologies that encroach upon our daily lives.

COMM 220 - Understanding Popular Culture and Media 4 credit hours. We often refer to popular entertainment as escapist without fully considering what we are escaping from, where we are escaping to, or in what ways the experience affects

us. This class ponders these topics through an introduction to the core concepts and approaches associated with critical/cultural studies.

COMM 221 - Pop Culture Goes Global 4 credit hours. This course examines U.S. popular culture and the media and their sociological, economic and political influence on cultures at home and abroad. It offers students a deeper understanding of globalization and its effect on their lives. (Every year; Fall) (Cross-listed as GLBS 221)

COMM 237 - Media and Politics 4 credit hours. This course examines the relationship between mass media and politics. We will explore the ways in which mass communications media shape the politics of elections, daily governance, U.S. foreign policy, interest groups, social movements, and identity. (Cross-listed as POLS 237, SOCI 237)

COMM 300 - Special Topics 1 to 4 credit hours. This course provides opportunities for examining communication studies areas not covered in the regular offerings. Topics vary each semester.

COMM 301 - Broadcasters, Advertisers, and Audiences 4 credit hours. An overview of television and radio broadcasting and advertising in the United States. The course examines how a variety of factors--historical, cultural, political, legal, economic, and technological--affect the content and character of American broadcasting.

COMM 302 - Public Relations Principles 4 credit hours. Public relations is the values-driven management of relationships with groups of people that can influence an organization's success. This course examines how organizations can ethically and systematically build productive, mutually beneficial relationships with such groups. To accomplish this, we discuss: (1) the historical antecedents and contemporary practice of public relations in America; (2) the day-to-day tasks and communication responsibilities of public relations practitioners; and (3) the various challenges PR practitioners encounter in their careers. No prerequisite; COMM 205 recommended.

COMM 304 - History of the Motion Picture 4 credit hours. This film history course presents a chronological survey of the motion picture industry. The course focuses on cinema’s origins and its major developments by examining historical periods, movements and genres in the American studio system and on the global stage. (Offered on demand)

COMM 309 - Persuasion: Reception and Responsibility 4 credit hours. This course provides majors in communication studies and related areas with a foundation for rhetorical thinking. Critical issues in persuasion are addressed, along with a historical survey of rhetorical philosophy and theory. Students successfully completing the course will know expert opinions on issues concerning persuasive communication.

COMM 315 - Understanding Global Media and Cultural Change 4 credit hours. In this course students analyze global media (news and entertainment) in order to better understand how global media messages influence societies and audiences worldwide. Students also develop an understanding of how to create their own objective and persuasive global media messages. (Cross-listed as GLBS 315) (Every other year; Spring)

COMM 325 - Global Communication 4 credit hours. Global Communication introduces students to communication and media issues impacting the global community in the digital age, including: international telecommunication networks, transnational media corporations (based in America, Asia, the Middle East, etc.), global news, global

advertising, the Internet and information flow. Prerequisite: COMM 110 or permission of instructor. (Cross-listed as GLBS 325)

COMM 400 - Special Topics 1 to 4 credit hours. This course provides opportunities for examining communication studies areas not covered in the regular offerings. Topics vary each semester.

COMM 401 - Technology and Communication 4 credit hours. In this course we explore historical and contemporary questions raised by the introduction of new communication technologies with particular emphasis on the social, economic, and aesthetic impact of these emerging technologies. We examine how emerging technologies configure and drive globalization, capitalism, and democracy itself. Prerequisite: junior/senior standing, or permission of instructor.

COMM 409 - Organizational Communication 4 credit hours. This course introduces students to major concepts regarding communication in organizations, including the professional environment.

COMM 410 - Communication Ethics 4 credit hours. An exploration of ethical perspectives that pertain to communication in a variety of contexts, including interpersonal, small group, organizational, public and mass. Students learn to become more responsible senders and receivers of communication. Prerequisite: COMM 101 and COMM 110.

COMM 426 - Screenwriting 4 credit hours. This course is an advanced writing workshop that concentrates on the principles and techniques of industry standard three act screenplays. Prerequisite: COMM 205 or ENGL 102, or permission of instructor.

COMM 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

COMM 451 - Publishing Practicum 4 credit hours. Students work through all aspects of the process to publish an edition of an out-of-copyright text: conducting market research, selecting and editing the primary text, researching and writing an introduction, creating appropriate timelines and appendices, laying out the book using InDesign, designing the cover, procuring ISBN and Library of Congress numbers, submitting the text to the printer, and publishing the book using a print-on-demand model. Prerequisite: ENGL 102. (Cross-listed as ENGL 451)

COMM 465 - Gender, Race, Class and Media 4 credit hours. This course investigates how women and minorities (including sexual minorities) are covered/portrayed by the news and entertainment media and how underlying economic, political and sociological factors affect such coverage. It explores how media portrayals influence the public's views regarding women and minorities and how women and minorities view themselves. And it examines critics' charges that the media portray women and minorities in a negative light and strategies used to counteract possible resulting harm. Prerequisite: COMM 110 or permission of instructor. (Cross-listed as SJST 465, WGST 465)

COMM 475 - Specialized Reporting 4 credit hours. A workshop course in which students select and pursue an area of interest. Students, working in a simulated newsroom environment, will cover beats ranging from the courts to the Arts. Emphasis on developing quality beat coverage. Prerequisite: COMM 205 or permission of instructor.

COMM 485 - Internship in Communication 1 to 4 credit hours. This course entails a workplace experience that extends what is learned within the Communication Studies curriculum. Interns report to their COMM advisor and a counselor from the Career Development Center throughout the process. Interested COMM majors and minors should consult with their advisor for additional information prior to enrolling in this course. Maybe be repeated up to a total of 8 earned credit hours. Prerequisite: COMM 101 and permission of instructor.

GERO 118 - Introduction to Adult Development and Aging 4 credit hours. This course examines adulthood and aging from a biopsychosocial perspective. Topics include research methodology in adulthood; theories of normal aging, physical and environmental influences on adult development; diseases and disorders associated with aging; changes in cognition; intelligence and wisdom; gender and minority issues in aging; issues regarding death and dying. It also challenges popular misconceptions about aging. (Cross-listed as PSYC 118, SJST 118)

GERO 300 - Special Topics in Gerontology 2 to 4 credit hours. A series of directed readings on special topics, changing from semester to semester. Through a combination of reading, seminar feedback, and guest lectures, students are able to explore areas of special interest in greater depth. Prerequisite: PSYC 101. Recommended GERO 118 or permission.

GERO 429 - Cognition and Aging 2 credit hours. A lecture and discussion course covering current research and theories of cognitive processes in the older adult. Basic topics include age differences in memory, verbal processes, motor performance, perception, problem solving, and intelligence. Prerequisite: PSYC 101. Recommended: PSYC 332 or GERO 118 or permission of instructor. (Cross-listed as PSYC 429) (Alternate years)

GERO 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

GERO 485 - Gerontology Internship 4 credit hours. Field work associated with federal, state or local agencies for the aging, or with social service, health care, legal, recreational or residential facilities primarily serving older adults. Supervision provided jointly by agency personnel and the instructor. At least 6 hours per week in a field placement is expected. Prerequisite: Senior Gerontology major and permission of instructor.

GLBS 221 - Pop Culture Goes Global 4 credit hours. This course examines U.S. popular culture and the media and their sociological, economic and political influence on cultures at home and abroad. It offers students a deeper understanding of globalization and its effect on their lives. (Every year; Fall) (Cross-listed as COMM 221)

GLBS 315 - Understanding Global Media and Cultural Change 4 credit hours. In this course students analyze global media (news and entertainment) in order to better understand how global media messages influence societies and audiences worldwide. Students also develop an understanding of how to create their own objective and persuasive global media messages. (Cross-listed as COMM 315) (Every other year; Spring)

GLBS 325 - Global Communication 4 credit hours. Global Communication introduces students to communication and media issues impacting the global community in the digital age, including: international telecommunication networks, transnational media

corporations (based in America, Asia, the Middle East, etc.), global news, global advertising, the Internet and information flow. Prerequisite: COMM 110 or permission of instructor. (Cross-listed as COMM 325)

PSYC 101 - Introduction to Psychology 4 credit hours. An introduction to the scientific study of behavior and mental processes. Topics typically include sensation and perception, learning and memory, consciousness, cognition and mental abilities, motivation and emotion, human development, personality, gender and sexuality, psychological disorders and therapies, and social influences on behavior.

PSYC 118 - Introduction to Adult Development and Aging 4 credit hours. This course examines adulthood and aging from a biopsychosocial perspective. Topics include research methodology in adulthood; theories of normal aging, physical and environmental influences on adult development; diseases and disorders associated with aging; changes in cognition; intelligence and wisdom; gender and minority issues in aging; issues regarding death and dying. It also challenges popular misconceptions about aging. (Cross-listed as GERO 118, SJST 118)

PSYC 200 - Special Topics 1 to 4 credit hours.

PSYC 210 - Communication and Counseling Skills 2 credit hours. Focused on working with adults, this course teaches interpersonal communication and counseling skills and theory to students preparing for careers in the helping professions. The course promotes self-understanding through experiential learning and role playing. Videotaping and microlabs may be employed. Prerequisite: PSYC 101 or GERO 118.

PSYC 220 - Psychological Methods and Statistics 4 credit hours. An introduction to the use of data and theory in psychology. Topics include: philosophy of the scientific method, experiments and other research strategies, descriptive and inferential statistics and hypothesis testing. The course emphasizes statistical reasoning and its relationship to the scientific method. Required for majors and minors. Prerequisite: PSYC 101.

PSYC 221 - Psychological Research Methods and Statistics I 4 credit hours. The content covered in this course will provide a strong foundation for understanding psychology as a science, human subjects research ethics, reading and understanding research reports, and will include the application of course material using Excel to analyze data. This course will teach and apply the statistics and research methods utilized in non-experimental psychological research; there will be an equal emphasis on the statistics and methods components. What you learn in this class is the foundation of all of psychology, whether theoretical or applied, academic or professional.

PSYC 222 - Psychological Research Methods and Statistics II 4 credit hours. This course will consist of a detailed overview of experimental research methods and accompanying statistical procedures and how to apply them to experimental psychological research. There will be an equal emphasis on the statistics and methods components. This course will give you the skills necessary to design and conduct studies and understand statistical analyses. The content covered in this course will provide a strong foundation for understanding psychology as a science and will include the application of course material using statistical software (i.e., Excel and SPSS) to analyze data. The course allows you the opportunity to apply the knowledge learned in class to conducting a real study as a class, and writing a research report using APA style. What you learn in this class is the foundation of all of psychology, whether theoretical or applied, academic or professional.

PSYC 230 - Psychological Research and Design I 2 credit hours. Students learn how to apply the scientific method to study human behavior. The steps from reviewing the literature and generating a hypothesis to developing measurement procedures will be practiced. The final project will be an APA-style research proposal. Prerequisite: PSYC 220.

PSYC 251 - Principles of Learning and Behavior Modification 4 credit hours. The principles and techniques of behavioral assessment and management are examined, including how to strengthen adaptive behavior through shaping, reinforcement schedules, and relapse prevention and how to minimize or eliminate maladaptive behavior through behavior modification methods such as stimulus control and extinction procedures. Prerequisite: PSYC 101.

PSYC 261 - Cognitive Development 4 credit hours. The course examines the theories and research in cognitive development from infancy through adolescence. Piagetian, Vygotskian, and Information-Processing Approaches are explored while examining the development of processes including attention, perception, memory, language, and reasoning. Prerequisite: PSYC 101.

PSYC 262 - Social Development 4 credit hours. This course examines theories and research in child and adolescent social development. Relations with parents and peers, prosocial behavior, aggression, sex-role development, and social-cognitive development are studied. Prerequisite: PSYC 101.

PSYC 282 - Social Psychology 4 credit hours. In this course we study the influence people have on each other's behavior, perception, motivation, feelings and cognition. Topics include the self and identity, social perception and cognition, attribution, race and gender, prejudice and discrimination, conformity and obedience, groups and leadership, attitudes and persuasion, aggression and violence, helping and altruism, attraction and love, conflict and peacemaking. Prerequisite: PSYC 101. (Cross-listed as SJST 282)

PSYC 300 - Special Topics 1 to 4 credit hours. A series of directed readings, changing from semester to semester, which affords the student an opportunity to pursue topics of special interest in greater depth by intensive reading, discussion and seminar feedback.

PSYC 302 - Psychological Measurement 2 or 4 credit hours. An introduction to psychological assessment through a survey of the principles of test design, scoring, and interpretation for tests of achievement, intelligence, personality, career interests, and attitudes. Specific concepts include: item analysis and norms, reliability and validity, ethical and legal standards. Prerequisite: PSYC 101 and PSYC 220.

PSYC 310 - Professional Preparation in Psychology 2 credit hours. In this course we summarize psychology fields and discuss how to pursue graduate study and/or careers. Students write/critique cover letters, resumes, and essays. They take a GRE preparation test, participate in mock interviews, and interview a professional in a psychology field. Prerequisite: PSYC 101.

PSYC 311 - Sensation and Perception 4 credit hours. A study of the physiological and psychological processes involved in the immediate experience of sensory stimulation. Topics include sensory systems and coding mechanisms, psychophysical methods, signal detection, illusions, and complex perceptual processes. Prerequisite: PSYC 101.

PSYC 320 - Parenting Seminar 2 to 3 credit hours. This course provides students with an opportunity to learn about effective parenting through reading of literature and group discussion. The course explores a wide variety of issues, concerns, and problems that

parents often face as well as the joy and gratification that effective parenting brings. Prerequisite: PSYC 101. (Cross-listed as WGST 320)

PSYC 322 - Health Psychology 2 to 4 credit hours. The critical link between health and behavior is the focus of this course. Students discuss and explore, in seminar format, health-related topics such as nutrition, addiction, exercise, life stress, health care delivery systems, alternative medicine, AIDS, health promotion behavior and personality and proneness to disease. Prerequisite: PSYC 101.

PSYC 330 - Neuropsychology 4 credit hours. A non-laboratory course dealing with the neurological correlates and determinants of behavior. Emphasis on basic neuroanatomy and neurophysiology underlying human behavior, i.e., the physical basis of movement sensation, perception, emotion, motivation, learning, memory and language.

PSYC 332 - Cognitive Processes 4 credit hours. An exploration of the psychological organization and functions of the mind. The point of view of people as active processors of information is adopted. Topics include attention, recognition, varieties of memory, psycholinguistics and consciousness. Emphasis is placed on the experimental method and its application to the study of cognitive experiences and activities. Prerequisite: PSYC 101 or permission.

PSYC 341 - Theories of Personality 4 credit hours. This course examines the philosophic, scientific, and applied aspects of personality theory and research. The major orientations toward investigating personality will be explored, e.g., psychodynamic, depth-psychological, trait-factor, humanistic, and cognitive-personality models. Emphasis is placed on developing a working knowledge of each theory and methods of conducting personality research. Prerequisite: PSYC 101.

PSYC 342 - Psychopathology 4 credit hours. Examines the biological, psychological and societal perspectives on the taxonomy, etiology, and treatment of clinically significant psychopathology. Provides a basis for understanding the personal and social problems of such individuals. Prerequisite: PSYC 101. Recommended: PSYC 261, 262, 282 or 341.

PSYC 351 - Human Sexuality 4 credit hours. In this course we discuss sexual attitudes and behavior, gender roles, love and intimacy, contraception and abortion, pregnancy and childbirth, marriage and family life, variations in sexualities, STDs, and the many psychological and cultural factors that affect human sexual behavior. (Cross-listed as WGST 351)

PSYC 362 - Industrial/Organizational Psychology 4 credit hours. This course is designed to acquaint students with work psychologists perform in organizational settings. Topics may include methodology of industrial/organizational psychology, personnel selection, training and development, job satisfaction, leadership, work motivation, human performance and human engineering, performance appraisals, job stress and consumer behavior. Prerequisite: PSYC 101.

PSYC 371 - The Psychology of Death and Dying 4 credit hours. The study of death addresses questions rooted at the center of human experience. Included are historical and modern concepts, attitudes and practices toward the dying and the bereaved; psychological stages and experiences through which the dying may pass; an investigation of suicide including prevention, intervention and postvention; the concept of death in health care, medical ethics and law. Prerequisite: PSYC 101.

PSYC 372 - Psychology of Gender 4 credit hours. This course examines the psychological, biological, social, and life-span development differences and similarities

of the genders. Topics include cognitive abilities and achievement, personality characteristics, work issues, violence prevention, love relationships and sexualities, reproductive concerns, and physical and mental health issues. Prerequisite: PSYC 101. (Cross-listed as WGST 372, SJST 372)

PSYC 389 - Introduction to Art Therapy 3 credit hours. An introduction to art as a psychotherapeutic modality. Topics include art as a diagnostic tool, art as a means for emotional expression, theoretical backgrounds, and developmental stages of art. This course promotes experiential learning through participation in art therapy exercises. Prerequisite: PSYC 101; PSYC 342 and either PSYC 261 or 262 recommended.

PSYC 411 - Advanced Psychological Research Methods and Statistics 4 credit hours. Students in this advanced course in psychological research methods and statistics will learn how to apply the scientific method to study human behavior. This course will build on the skills students learned in Psychological Methods and Statistics I (PSYC 221) and Psychological Methods and Statistics II (PSYC 222). The content covered in this course will include the logic of various research designs and their statistical analysis and provide a strong foundation for understanding psychology as a science. Students will practice designing and conducting studies, gathering and interpreting data, and writing about and presenting research using APA style.

PSYC 412 - Research Practicum 4 credit hours. Students in this research practicum apply the scientific method to study human behavior. Students will be certified and approved to ethically conduct research on human subjects, independently design and conduct an original empirical study, gather and interpret their own data, and write a research report using APA style. Students disseminate their research findings in a professional-style presentation. Prerequisite: PSYC 411.

PSYC 429 - Cognition and Aging 2 credit hours. A lecture and discussion course covering current research and theories of cognitive processes in the older adult. Basic topics include age differences in memory, verbal processes, motor performance, perception, problem solving, and intelligence. Prerequisite: PSYC 101. Recommended: PSYC 332 or GERO 272 or permission of instructor. (Cross-listed as GERO 429) (Alternate years)

PSYC 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

PSYC 471 - Child Psychopathology 3 credit hours. Through readings, presentations, and discussions, this course seeks to illuminate variation in child/adolescent behavior, emotion, and personality. Course material will consist of theory, research, and practice regarding "disturbed" and "disturbing" children and adolescents. Prerequisite: PSYC 261, 262 or 342; or permission of the instructor. Not open to students who have taken PSYC 477.

PSYC 472 - Child Interventions 3 credit hours. This seminar introduces students to interventions for children and adolescents with disabilities and mental health disorders. Treatment strategies will be explored (such as behavior modification, play therapy, family therapy) along with treatment settings in which such therapies are delivered (schools, community mental health centers, institutions). Prerequisite: PSYC 261, 262, or 342.

PSYC 477 - Child and Adolescent Psychopathology 4 credit hours. This course explores the field of child and adolescent psychopathology, including the theories

and research that serve as the foundation of assessment, diagnosis and treatment of psychological disorders. Prerequisite: PSYC 261, 262 or 342; or permission of the instructor. Not open to students who have taken PSYC 471.

PSYC 485 - Practicum 2 to 4 credit hours. A supervised field experience planned to develop skills in designing interventions within educational, vocational, social services or mental health settings. In addition to field placements, students may meet in weekly seminars to discuss current literature. Prerequisite: PSYC 101 and permission of instructor.

PSYC 491 - Clinical Procedures 4 credit hours. Focuses on the development and application of general clinical skills. Each student has the opportunity to demonstrate these skills through supervised interactions with a volunteer counselee. Prerequisite: PSYC 210, 341 or 342; and permission of Division Selection Committee.

PSYC 492 - Clinical Practicum 4 credit hours. This course provides advanced clinical/counseling-track psychology students with practical experience in a human service setting. Since each practicum site offers a somewhat different experience, attempts are made to place students in a setting that matches their interests. Supervision is provided for both on-site and in-class work. Prerequisite: PSYC 491 and permission of Division Selection Committee.

PSYC 497 - Senior Seminar 2 credit hours. This course provides students with an opportunity to explore contributions of important research and theorists through reading of literature, group discussions, and paper presentations. It will also focus on a variety of contemporary topics and issues. Required for majors. Prerequisite: Completion of 20 hours of psychology coursework.

SJST 118 - Introduction to Adult Development and Aging 4 credit hours. This course examines adulthood and aging from a biopsychosocial perspective. Topics include research methodology in adulthood; theories of normal aging, physical and environmental influences on adult development; diseases and disorders associated with aging; changes in cognition; intelligence and wisdom; gender and minority issues in aging; issues regarding death and dying. It also challenges popular misconceptions about aging. (Cross-listed as GERO 118, PSYC 118)

SJST 282 - Social Psychology 4 credit hours. In this course we study the influence people have on each other's behavior, perception, motivation, feelings and cognition. Topics include the self and identity, social perception and cognition, attribution, race and gender, prejudice and discrimination, conformity and obedience, groups and leadership, attitudes and persuasion, aggression and violence, helping and altruism, attraction and love, conflict and peacemaking. Prerequisite: PSYC 101. (Cross-listed as PSYC 282)

SJST 372 - Psychology of Gender 4 credit hours. This course examines the psychological, biological, social, and life-span development differences and similarities of the genders. Topics include cognitive abilities and achievement, personality characteristics, work issues, violence prevention, love relationships and sexualities, reproductive concerns, and physical and mental health issues. Prerequisite: PSYC 101. (Cross-listed as PSYC 372, WGST 372)

SJST 465 - Gender, Race, Class and Media 4 credit hours. This course investigates how women and minorities (including sexual minorities) are covered/portrayed by the news and entertainment media and how underlying economic, political and sociological factors affect such coverage. It explores how media portrayals influence the public's views regarding women and minorities and how women and minorities view themselves.

And it examines critics' charges that the media portray women and minorities in a negative light and strategies used to counteract possible resulting harm. Prerequisite: COMM 110 or permission of instructor. (Cross-listed as COMM 465, WGST 465)

WGST 320 - Parenting Seminar 2 credit hours. This course provides students with an opportunity to learn about effective parenting through reading of literature and group discussion. The course explores a wide variety of issues, concerns, and problems that parents often face as well as the joy and gratification that effective parenting brings. Prerequisite: PSYC 101. (Cross-listed as PSYC 320)

WGST 351 - Human Sexuality 4 credit hours. In this course we discuss sexual attitudes and behavior, gender roles, love and intimacy, contraception and abortion, pregnancy and childbirth, marriage and family life, variations in sexualities, STDs, and the many psychological and cultural factors that affect human sexual behavior. (Cross-listed as PSYC 351)

WGST 372 - Psychology of Gender 4 credit hours. This course examines the psychological, biological, social, and life-span development differences and similarities of the genders. Topics include cognitive abilities and achievement, personality characteristics, work issues, violence prevention, love relationships and sexualities, reproductive concerns, and physical and mental health issues. Prerequisite: PSYC 101. (Cross-listed as PSYC 372, SJST 372)

WGST 465 - Gender, Race, Class and Media 4 credit hours. This course investigates how women and minorities (including sexual minorities) are covered/portrayed by the news and entertainment media and how underlying economic, political and sociological factors affect such coverage. It explores how media portrayals influence the public's views regarding women and minorities and how women and minorities view themselves. And it examines critics' charges that the media portray women and minorities in a negative light and strategies used to counteract possible resulting harm. Prerequisite: COMM 110 or permission of instructor. (Cross-listed as COMM 465, SJST 465)

Social Sciences

ANTH 110 - Cultural Anthropology 4 credit hours. This introductory course surveys the human condition in anthropological perspective. Emphasis is on the nature of culture, sociocultural evolution, human ecology, theoretical strategies, kinship, descent, gender, language, and belief systems.

ANTH 120 - Human Origins 4 credit hours. An introduction to physical anthropology surveying evolutionary theory as applied to humans. Special emphasis on non-human primates, fossil man (hominid evolution) and the diversity of modern human populations.

ANTH 200 - Special Topics 1 to 4 credit hours. An open course varying in content from year to year which allows concentration in specialized areas.

ANTH 300 - Special Topics 1 to 4 credit hours. An open course varying in content from year to year which allows concentration in specialized areas.

ANTH 302 - The Nacirema 4 credit hours. American culture and society in cross-cultural perspective. This course emphasizes themes observed by international visitors and by anthropologists in cross-national studies. ANTH 110 recommended as a prerequisite.

ANTH 303 - Health and Culture 4 credit hours. An examination of the interaction of culture and biology in the broad realm of physical and mental health and illness. Topics

include non-Western healers and healing practices, theories of disease and healing, cultural psychiatry, and epidemiology. Prerequisite: ANTH 110.

ANTH 304 - Language and Culture 4 credit hours. An introduction to anthropological linguistics emphasizing the origin, nature and evolution of human language; the Sapir-Whorf hypothesis, sociolinguistics (especially the linguistic aspects of gender and class), and nonverbal behavior. Prerequisite: ANTH 110. Recommended: 200-level foreign language course.

ANTH 309 - Magic and Religion 4 credit hours. An examination of the diversity to be found among human religious beliefs and practices. Includes the relationship between magic, science and religion, the functions of witchcraft, divination and spirit possession and the role of religion in cultural revitalization. Prerequisite: ANTH 110 or permission of instructor. (Offered on demand)

ANTH 400 - Special Problems in Anthropology 1 to 4 credit hours. An open course varying in content from year to year which allows concentration on such specialized areas as gender and society, anthropological theory and methods, native cultures of North America, demography, and the like. Prerequisite: SOCI 110 or ANTH 110 and junior or senior standing or permission of instructor. (Sufficient demand)

ANTH 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

ANTH 470 - Field Work 2 to 4 credit hours. Supervised on-site field work on an approved topic. Prerequisite: ANTH 110, junior or senior standing, and permission of instructor.

ANTH 495 - Global Issues Seminar 4 credit hours. This integrative capstone course allows seniors to study a variety of global issues in-depth and to present the results of their own particular global experiences and studies. Topics examined will vary from year to year. The seminar may be focused on a central theme or on a variety of issues, depending upon the students' international interests and the instructor's discretion. Prerequisite: GLBS 101; Study Abroad; senior standing. (Cross-listed as GLBS 495 and SOCI 495)

CRIM 200 - Special Topics 1 to 4 credit hours.

CRIM 300 - Special Topics 1 to 4 credit hours. An open course varying in contents from year to year, which allows concentration on special topics.

CRIM 340 - Concepts of Penology 4 credit hours. A survey of correctional concepts and philosophy with emphasis on the correctional institution as a community and the sociology of confinement. Additional focus on penal reform, correctional administration and innovation. Prerequisite: SOCI 110 and SOCI 245. (Cross-listed as SJST 340)

CRIM 351 - Seminar in Criminal Behavior 4 credit hours. Specific problems and issues concerning criminal behavior are examined in depth. The area of investigation varies with the disciplinary orientation of the instructor. Includes analysis of the causes of particular kinds of behavior, examination of methods of control, and consideration of current approaches to rehabilitation. Prerequisite: SOCI 245 and senior standing.

CRIM 400 - Special Topics 1 to 4 credit hours. An open course varying in contents from year to year, which allows concentration on special topics.

CRIM 450 - Independent Study 1 to 4 credit hours. Individual research by a Criminal Justice Studies major with senior standing into an area of interest. Research topics are

chosen to complement material covered in other courses and to provide the student with additional information relevant to career or graduate interests. Approved Plan of Study required.

CRIM 470 - Field Work in Criminal Justice Studies 2 to 4 credit hours. Students work with criminal justice related agencies and are expected to apply their theoretical knowledge to the practical experience gained from field work. Prerequisite: Senior standing, minimum 2.5 overall GPA and permission of instructor.

ENVS 212 - Introduction to Remote Sensing 4 credit hours. Introduction to electromagnetic radiation principles, remote detection, and applications in a geospatial context. This course will provide an overview of aerial photography and photogrammetry, an introduction to passive and active (LIDAR) sensors, digital image acquisition and interpretation. This course is designed for students majoring in Environmental Studies, Geology, and Data Analytics, or anyone interested in remote imagery analysis.

ENVS 214 - Environment, Politics and Society 4 credit hours. This course examines multiple trajectories of environmental change in the United States since the dawn of the industrial age, explores the basic societal forces that drive processes of environmental decay today, and explores major environmental issues/controversies at the center of contemporary debate. (Cross-listed as POLS 214, SOCI 214)

GLBS 100 - Topics in Global Studies 1 to 4 credit hours. Topics not covered in other Global Studies courses are presented.

GLBS 101 - Introduction to Global Studies 4 credit hours. This course introduces students to an overview of contemporary human patterns from geographic, environmental, linguistic, socio-cultural, religious, political, and economic perspectives. From this global framework, students learn to communicate (and think) across cultures.

GLBS 200 - Special Topics 1 to 4 credit hours. An open course, varying in content from year to year, which allows for concentration in specialized areas. (Sufficient demand)

GLBS 271 - World Politics 4 credit hours. This course examines the changing nature of world politics, exploring broad themes such as the evolution of warfare, the role of leading powers, the rise of international organizations, and global political economy. Specific transnational challenges addressed include terrorism, human rights, nuclear proliferation, clashing collective identities and environmental degradation.

GLBS 300 - Special Topics 1 to 4 credit hours. An open course, varying in content from year to year, which allows for concentration in specialized areas. (Sufficient demand)

GLBS 351 - European Politics 4 credit hours. From post-WWII attempts to prevent future conflicts has grown a unique political structure called the European Union. This course analyzes the political institutions and political culture of both the European Union and some important countries making up the EU. (Cross-listed as POLS 351)

GLBS 400 - Special Topics 1 to 4 credit hours. An open course, varying in content from year to year, which allows for concentration in specialized areas. (Sufficient demand)

GLBS 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

GLBS 495 - Global Issues Seminar 4 credit hours. This integrative capstone course allows seniors to study a variety of global issues in-depth and to present the results of their own particular global experiences and studies. Topics examined will vary from year to year. The seminar may be focused on a central theme or on a variety of issues, depending upon the students' international interests and the instructor's discretion. Prerequisite: GLBS 101; Study Abroad; senior standing. (Cross-listed as ANTH 495 and SOCI 495)

HIST 382 - Latin American Politics 4 credit hours. After a brief review of the region's colonial and 19th-century political histories, this course focuses on the changing patterns of modern politics in leading Latin American countries, from "oligarchical" plutocracy to mass-based populism and socialist revolution, from repressive military authoritarianism to more recently established models of representative and participatory democracy. (Cross-listed as POLS 382)

PHIL 341 - Modern Political Theory 4 credit hours. This course is a survey of the major political theorists from the Renaissance through the twentieth century, with primary emphasis on western thinkers. Particular attention is given to theory as an historical and cultural phenomenon. (Cross-listed as POLS 341, SJST 341)

POLS 110 - American Politics 4 credit hours. An introductory survey of the American political system. Emphasis on the structures and processes of the political system with additional study of some of the problems faced by the system.

POLS 200 - Special Topics 1 to 4 credit hours. Examines topics of special interest not normally covered in other political science courses. Examples are Biopolitics, Political Socialization. (Sufficient demand)

POLS 214 - Environment, Politics and Society 4 credit hours. This course examines multiple trajectories of environmental change in the United States since the dawn of the industrial age, explores the basic societal forces that drive processes of environmental decay today, and explores major environmental issues/controversies at the center of contemporary debate. (Cross-listed as ENVS 214, SOCI 214)

POLS 230 - Introduction to Data Analysis and Statistics 4 credit hours. This course is an introduction to statistics and data analysis for students in the social sciences, covering the nature of variables, descriptive statistics, probability, and inferential statistics. Students learn to use a statistical software program to analyze large data sets to further their understanding of the importance of data analytics to an examination of social and political life. (Cross-listed as SOCI 230)

POLS 232 - Judicial Processes 4 credit hours. The theory and practice of judicatory systems with primary emphasis on Anglo-American judicial processes and problems.

POLS 237 - Media and Politics 4 credit hours. This course examines the relationship between mass media and politics. We will explore the ways in which mass communications media shape the politics of elections, daily governance, U.S. foreign policy, interest groups, social movements, and identity. (Cross-listed as COMM 237, SOCI 237)

POLS 242 - Approaches to Law 4 credit hours. What is the law and why do we obey it? What authority stands behind law? How do our answers influence the way we make and interpret law? We examine how others have approached these kinds of questions with an eye toward better understanding our own legal system.

POLS 253 - Dictatorship and Democracy 4 credit hours. This course comparatively examines four political movements (Liberalism, Communism, Fascism, and Islamic Fundamentalism) that have shaped the evolution of modern politics around the world, from authoritarian rule to representative democracy.

POLS 271 - World Politics 4 credit hours. This course examines the changing nature of world politics, exploring broad themes such as the evolution of warfare, the role of leading powers, the rise of international organizations, and global political economy. Specific transnational challenges addressed include terrorism, human rights, nuclear proliferation, clashing collective identities and environmental degradation.

POLS 300 - Special Topics 1 to 4 credit hours. Examines topics of special interest not normally covered in other political science courses. Examples are Biopolitics, Political Socialization. (Sufficient demand)

POLS 313 - State and Local Politics 4 credit hours. In the American governmental system, the intertwined destinies of states and their local governments are critical. This course studies the structure of decision-making at the state and local level, forces affecting decision, outcomes of decision, and the challenges governments face. (Alternate years)

POLS 316 - American Constitutional Law and Politics 4 credit hours. In this course we examine the development of the Supreme Court as a major political institution concentrating primarily on the Court's decisions and its internal politics. Prerequisite: POLS 110; junior or senior standing recommended. (Cross-listed as SJST 316)

POLS 318 - The Presidency 4 credit hours. After studying the evolution of presidential power, this course will examine the relationship of the presidency to other branches of government. Students will also learn how presidents work within and against political constraints in order to get policies enacted. Prerequisite: POLS 110.

POLS 331 - Parties and Elections 4 credit hours. With emphasis on the American system, we analyze theories of parties, party organization, party conduct of campaigns and elections, voting behavior, and party roles in government.

POLS 341 - Modern Political Theory 4 credit hours. This course is a survey of the major political theorists from the Renaissance through the twentieth century, with primary emphasis on western thinkers. Particular attention is given to theory as an historical and cultural phenomenon. (Cross-listed as PHIL 341, SJST 341)

POLS 346 - American Political Thought 4 credit hours. This course introduces students to political thought in the United States. It explores "liberal" ideals such as individualism, freedom, equality, citizenship, and democracy, as well as important alternatives to those ideas. It will also examine the ways in which race, ethnicity, and gender have shaped American political thought. Prerequisite: POLS 110. (Cross-listed as SJST 336)

POLS 351 - European Politics 4 credit hours. From post-WWII attempts to prevent future conflicts has grown a unique political structure called the European Union. This course analyzes the political institutions and political culture of both the European Union and some important countries making up the EU. (Cross-listed as GLBS 351)

POLS 355 - Public Policy 4 credit hours. The policy process is the heart of politics: "Who gets What, When, How?" This course emphasizes the stages of the process and the types of policies that government considers. A case study of some policy area (elderly) is provided.

POLS 356 - Social Movements 4 credit hours. This course explores the experiences of social movements that struggle for justice and societal transformation along lines of class, race, ethnicity, gender, sexuality, religion, and more. Why do they emerge? How do they organize and operate? Why do they succeed or fail? (Cross-listed as SJST 356, SOCI 356)

POLS 373 - Terrorism and International Security 4 credit hours. This course will deepen students' understandings of 1) what terrorism is, 2) how terrorism has evolved over time, 3) the key factors generating contemporary terrorism, 4) how terrorism is inspired, financed and organized, and 5) counterterrorist strategies.

POLS 382 - Latin American Politics 4 credit hours. After a brief review of the region's colonial and 19th-century political histories, this course focuses on the changing patterns of modern politics in leading Latin American countries, from "oligarchical" plutocracy to mass-based populism and socialist revolution, from repressive military authoritarianism to more recently established models of representative and participatory democracy. (Cross-listed as HIST 382)

POLS 400 - Special Topics 1 to 4 credit hours.

POLS 411 - Bureaucracy 4 credit hours. Analysis of the administrative policy processes at the national level. Internal interaction and budgetary processes as well as interchange with external governmental and political institutions. Prerequisite: POLS 110. (Alternate years)

POLS 417 - American Civil Liberties 2 credit hours. Analysis of such current legal and political issues as free speech, religion, poverty, privacy, obscenity, and racial and sexual discrimination with attention to both established and latent areas of concern. Focuses on Supreme Court activity. Other governmental action considered, along with the theoretical and social contexts of the problems examined. Prerequisite: junior or senior standing.

POLS 420 - Social Theory: A Survey 4 credit hours. An examination of contemporary theoretical schools, e.g. symbolic interactionism, structural functionalism, exchange and conflict, and ethnomethodology. Special attention devoted to the precursors and contemporary representatives of the respective schools. Prerequisite: SOCI 110 or ANTH 110 or permission of instructor. (Cross-listed as SOCI 420) (Offered Fall, odd years)

POLS 431 - Research Design and Strategies 4 credit hours. This course examines the methods by which social science researchers generate new knowledge and covers major data collection designs, sampling techniques, and measurement strategies. Students spend the semester developing their research skills and designing their own research proposals. Prerequisite: SOCI/POLS 230. (Cross-listed as SOCI 431)

POLS 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Open to Political Science majors at the permission of instructor. Approved Plan of Study required.

POLS 470 - Field Work 2 to 4 credit hours. Supervised on-site field work on an approved topic. Prerequisite: Junior/senior standing; minimum 2.5 overall GPA and permission of instructor.

SJST 100 - Special Topics in Social Justice Studies 1 to 4 credit hours. In this course topics in Social Justice Studies are explored. Topics vary from term to term.

SJST 101 - Introduction to Social Justice Studies 4 credit hours. In Social Justice Studies, we analyze power, privilege, and oppression: Do individuals from all identity groups enjoy equitable access to economic, political, and cultural power, and have the opportunity to participate fully in shaping their society? Just what is an identity group, and how do such groups form? Where do prejudice and discrimination come from, and what strategies have been used to effect social change? What conceptions of justice inform the way we think about the distribution of social resources? Guided by an interdisciplinary team of instructors, students address these questions through reading, writing, and hands-on learning. (This is the core course for the minor in Social Justice Studies.)

SJST 110 - Introduction to Sociology 4 credit hours. This is the foundation course in sociology, covering the basic concepts needed for a sociological understanding of society. These include culture, socialization, deviance, social stratification, race and ethnicity, gender, sexuality, families, social movements, and social change. The course is designed primarily for first year students. (Cross-listed as SOCI 110)

SJST 200 - Special Topics in SJST 1 to 4 credit hours. In this course topics in Social Justice Studies are explored. Topics vary from term to term.

SJST 242 - Approaches to Law 4 credit hours. What is the law and why do we obey it? What authority stands behind law? How do our answers influence the way we make and interpret law? We examine how others have approached these kinds of questions with an eye toward better understanding our own legal system.

SJST 300 - Special Topics in Social Justice Studies 1 to 4 credit hours. In this course topics in Social Justice Studies are explored. Topics vary from term to term.

SJST 316 - American Constitutional Law and Politics 4 credit hours. In this course we examine the development of the Supreme Court as a major political institution concentrating primarily on the Court's decisions and its internal politics. Prerequisite: POLS 110; junior or senior standing recommended. (Cross-listed as POLS 316)

SJST 336 - American Political Thought 4 credit hours. This course introduces students to political thought in the United States. It explores "liberal" ideals such as individualism, freedom, equality, citizenship, and democracy, as well as important alternatives to those ideas. It will also examine the ways in which race, ethnicity, and gender have shaped American political thought. Prerequisite: POLS 110. (Cross-listed as POLS 346)

SJST 340 - Concepts of Penology 4 credit hours. A survey of correctional concepts and philosophy with emphasis on the correctional institution as a community and the sociology of confinement. Additional focus on penal reform, correctional administration and innovation. Prerequisite: SOCI 110 and SOCI 245. (Cross-listed as CRIM 340)

SJST 341 - Modern Political Theory 4 credit hours. This course is a survey of the major political theorists from the Renaissance through the twentieth century, with primary emphasis on western thinkers. Particular attention is given to theory as an historical and cultural phenomenon.(Cross-listed as PHIL 341, POLS 341)

SJST 344 - Sociology of Deviance 4 credit hours. Deviance is presented as an aspect of the normal functioning of a society. This course is a study of the processes by which attitudes and behaviors are defined as deviant, and by which those labels are applied to individuals. Prerequisite: SOCI 110 or ANTH 110. (Cross-listed as SOCI 344)

SJST 346 - Sociology of Sex and Gender 4 credit hours. In this course we examine the concepts of sex and gender as they are defined in sociological literature, focusing on how social contexts (i.e., education, employment, family, sexuality and reproduction, etc.) construct gender which, in turn, shapes future opportunities for individuals in society.. Prerequisite: SOCI 110 or ANTH 110. (Cross-listed as SOCI 346, WGST 346)

SJST 355 - Power, Privilege, and Inequality 4 credit hours. This course investigates the multiple hierarchies defined by social class, race/ethnicity, gender, and sexuality and the consequences of one's location in them. Current data are examined on the unequal distribution of power, property, and prestige in American society. Guided by social scientific scholarship on stratification, emphasis is on intersectionality theory to explain systems of privilege. Prerequisite: SOCI 110 or ANTH 110. (Cross-listed as SOCI 355)

SJST 356 - Social Movements 4 credit hours. This course explores the experiences of social movements that struggle for justice and societal transformation along lines of class, race, ethnicity, gender, sexuality, religion, and more. Why do they emerge? How do they organize and operate? Why do they succeed or fail? (Cross-listed as POLS 356, SOCI 356)

SJST 360 - Special Topics in Social Justice Studies 1 to 4 credit hours. In this course topics in Social Justice Studies are explored. Topics vary from term to term.

SJST 385 - Internship 1 to 4 credit hours.

SJST 400 - Special Topics in Social Justice Studies 1 to 4 credit hours. In this course topics in Social Justice Studies are explored. Topics vary from term to term.

SJST 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

SOCI 110 - Introduction to Sociology 4 credit hours. This is the foundation course in sociology, covering the basic concepts needed for a sociological understanding of society. These include culture, socialization, deviance, social stratification, race and ethnicity, gender, sexuality, families, social movements, and social change. The course is designed primarily for first year students. (Cross-listed as SJST 110)

SOCI 200 - Special Topics 1 to 4 credit hours. An open course, varying in content from year to year, which allows for concentration on such specialized areas as Political Sociology, Demography, Criminology, Social Change, Stratification, and the like. Prerequisite: SOCI 110 or ANTH 110 or permission of instructor. (Sufficient demand)

SOCI 214 - Environment, Politics and Society 4 credit hours. This course examines multiple trajectories of environmental change in the United States since the dawn of the industrial age, explores the basic societal forces that drive processes of environmental decay today, and explores major environmental issues/controversies at the center of contemporary debate. (Cross-listed as ENVS 214, POLS 214)

SOCI 230 - Introduction to Data Analysis and Statistics 4 credit hours. This course is an introduction to statistics and data analysis for students in the social sciences, covering the nature of variables, descriptive statistics, probability, and inferential statistics. Students learn to use a statistical software program to analyze large data sets to further their understanding of the importance of data analytics to an examination of social and political life. (Cross-listed as POLS 230)

SOCI 235 - Socialization 4 credit hours. An inquiry into the processes by which social actors learn the norms, behaviors, and patterns of attention appropriate to their positions in society. Topics discussed include: "nature versus nurture," theoretical approaches to socialization, social structure, and socialization in adult life. The relationship between socialization and other sociological concepts, such as gender, social class, and occupation are discussed. Prerequisite: SOCI 110 or ANTH 110. (Alternate years).

SOCI 237 - Media and Politics 4 credit hours. This course examines the relationship between mass media and politics. We will explore the ways in which mass communications media shape the politics of elections, daily governance, U.S. foreign policy, interest groups, social movements, and identity. (Cross-listed as COMM 237, POLS 237)

SOCI 242 - Social Problems 4 credit hours. Current social issues discussed and analyzed from a sociological perspective. Issues vary each term but may be drawn from the following: population and the environment; work and alienation; education; health; leisure, social welfare, and other areas. Prerequisite: SOCI 110 or ANTH 110. (Sufficient demand)

SOCI 245 - Crime and Society 4 credit hours. This introductory course provides students with a foundational understanding of the American criminal justice system. In this course, students learn about the empirical reality of crime, including categories and patterns of offending, as well the primary actors involved in the criminal justice process. Heavy emphasis is placed on a critical examination of the conflicts and contradictions of this system and an assessment of social responses to crime. Prerequisite: SOCI 110 or ANTH 110.

SOCI 253 - Social Welfare Institutions 4 credit hours. Examines social welfare institutions in the context of change brought about by industrialization and urbanization. Focus on types of welfare, welfare policy and the structure of services. (Cross-listed as WGST 253)

SOCI 343 - Race and Ethnicity 4 credit hours. A discussion of theory and research concerning racial and ethnic relations in the United States and in various parts of the world.

SOCI 344 - Sociology of Deviance 4 credit hours. Deviance is presented as an aspect of the normal functioning of a society. This course is a study of the processes by which attitudes and behaviors are defined as deviant, and by which those labels are applied to individuals. Prerequisite: SOCI 110 or ANTH 110. (Cross-listed as SJST 344)

SOCI 346 - Sociology of Sex and Gender 4 credit hours. In this course we examine the concepts of sex and gender as they are defined in sociological literature, focusing on how social contexts (i.e., education, employment, family, sexuality and reproduction, etc.) construct gender which, in turn, shapes future opportunities for individuals in society. Prerequisite: SOCI 110 or ANTH 110. (Cross-listed as SJST 346, WGST 346)

SOCI 348 - Sociology of Families 4 credit hours. An investigation of the relationship between the family and other social institutions, particularly in regard to the family functions of population maintenance, socialization and social placement. Prerequisite: SOCI 110 or ANTH 110. (Cross-listed as WGST 348)

SOCI 349 - Sociology of Health,Illness & 4 credit hours. Explores the social construction of health, illness, and disability while centering individual lived experiences. Critically analyzes medicine (as social institution), U.S. healthcare system, and social

causes and consequences of health. Heavy focus on access and equity issues. Prerequisite SOCI 110.

SOCI 355 - Power, Privilege, and Inequality 4 credit hours. This course investigates the multiple hierarchies defined by social class, race/ethnicity, gender, and sexuality and the consequences of one's location in them. Current data are examined on the unequal distribution of power, property, and prestige in American society. Guided by social scientific scholarship on stratification, emphasis is on intersectionality theory to explain systems of privilege. Prerequisite: SOCI 110 or ANTH 110. (Cross-listed as SJST 355)

SOCI 356 - Social Movements 4 credit hours. This course explores the experiences of social movements that struggle for justice and societal transformation along lines of class, race, ethnicity, gender, sexuality, religion, and more. Why do they emerge? How do they organize and operate? Why do they succeed or fail? (Cross-listed as POLS 356, SJST 356)

SOCI 400 - Special Topics 1 to 4 credit hours. An open course, varying in content from year to year, which allows for concentration on such specialized areas as Political Sociology, Demography, Criminology, Social Change, Stratification, and the like. Prerequisite: SOCI 110 or ANTH 110 and junior or senior standing or permission of instructor. (Sufficient demand)

SOCI 420 - Social Theory: A Survey 4 credit hours. An examination of contemporary theoretical schools, e.g. symbolic interactionism, structural functionalism, exchange and conflict, and ethnomethodology. Special attention devoted to the precursors and contemporary representatives of the respective schools. Prerequisite: SOCI 110 or ANTH 110 or permission of instructor. (Cross-listed as POLS 420) (Offered Fall, odd years)

SOCI 431 - Research Design and Strategies 4 credit hours. This course examines the methods by which social science researchers generate new knowledge and covers major data collection designs, sampling techniques, and measurement strategies. Students spend the semester developing their research skills and designing their own research proposals. Prerequisite: SOCI/POLS 230. (Cross-listed as POLS 431)

SOCI 450 - Independent Study 1 to 4 credit hours. Work on some topic not covered in any established course chosen by the student in consultation with the instructor. Work under this title may be carried out alone, in cooperation with other departments, or in an honors colloquium where a common problem is chosen. Approved Plan of Study and permission of departmental staff required.

SOCI 470 - Application of Sociology Field Work 2 to 4 credit hours. Field work associated with social services, corrections, health care, or educational agencies. Weekly class-workshop sessions and individual field work. Focus on the student's relationship with colleagues, professionals, and the public in various accredited institutional settings. Prerequisite: junior or senior standing and permission of instructor. (Sufficient demand)

WGST 253 - Social Welfare Institutions 4 credit hours. Examines social welfare institutions in the context of change brought about by industrialization and urbanization. Focus on types of welfare, welfare policy and the structure of services. (Cross-listed as SOCI 253)

WGST 346 - Sociology of Sex and Gender 4 credit hours. In this course we examine the concepts of sex and gender as they are defined in sociological literature, focusing

on how social contexts (i.e., education, employment, family, sexuality and reproduction, etc.) construct gender which, in turn, shapes future opportunities for individuals in society. Prerequisite: SOCI 110 or ANTH 110. (Cross-listed as SOCI 346, SJST 346)

WGST 348 - Sociology of Families 4 credit hours. An investigation of the relationship between the family and other social institutions, particularly in regard to the family functions of population maintenance, socialization and social placement. Prerequisite: SOCI 110 or ANTH 110. (Cross-listed as SOCI 348)

Women's and Gender Studies

SJST 201 - Women and Gender in Society 4 credit hours. This interdisciplinary course is the foundation of Women's and Gender Studies. It examines the relationships of women and gender worldwide to institutions and developments in the social, cultural, political, and economic spheres. Topics may include: the origins and development of modern feminism; gender and sexuality; progress and challenges for women and girls worldwide; reproductive justice and healthcare; women and work; sexual harassment and sexual assault; masculinities; gender in popular culture and the arts; the intersections of gender, class, race, and age; women and religion; women and leadership; and women and athletics. (Cross-listed as WGST 101)

WGST 101 - Women and Gender in Society 4 credit hours. This interdisciplinary course is the foundation of Women's and Gender Studies. It examines the relationships of women and gender worldwide to institutions and developments in the social, cultural, political, and economic spheres. Topics may include: the origins and development of modern feminism; gender and sexuality; progress and challenges for women and girls worldwide; reproductive justice and healthcare; women and work; sexual harassment and sexual assault; masculinities; gender in popular culture and the arts; the intersections of gender, class, race, and age; women and religion; women and leadership; and women and athletics. (Cross-listed as SJST 201)

WGST 200 - Special Topics 1 to 4 credit hours. Topics vary in content from term to term.

WGST 201 - Gender and Leadership 2 credit hours. In this course, members of the Women's Leadership Academy explore leadership theory and issues of gender and leadership. We examine questions such as: what qualities make an effective leader, why are so few women in leadership roles in certain professions, and what might feminist theory or chaos theory have to do with leadership? We approach these questions from both a personal and academic perspective. Participants assess their own leadership style and develop a personal philosophy of leadership. Class assignments include team-building activities and attendance at skill-building workshops. Prerequisite: Membership in the Women's Leadership Academy and instructor's permission.

WGST 300 - Special Topics 1 to 4 credit hours. Topics vary in content from term to term.

WGST 360 - Topics in Women's and Gender Studies 1 to 4 credit hours. Topics vary in content from term to term.

WGST 400 - Special Topics 1 to 4 credit hours. Topics vary in content from term to term.

WGST 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required. The end of this course of study must include a public presentation, such as an oral thesis defense, a Women's and Gender Studies Roundtable, the Undergraduate Research Forum or an art exhibition/ performance.

WGST 475 - Women's Leadership Academy Practicum 2 credit hours. The practicum is a semester-long experience in active, authentic leadership around a service project conducted by members of the Women's Leadership Academy. This course is taken twice for credit. Prerequisite: WGST 201.

WGST 485 - Internship 1 to 4 credit hours.

School of Art and Design Courses

Art Foundation

ART 101 - Foundation I 8 credit hours. All BFA students are required to take Foundation. The year-long experience is an expansive course in studio practice and field experience focused on hands-on skill building using low-tech materials to cultivate an understanding of basic artistic principles, idea and concept evolution. Studio practice is augmented by personal research, studies in art history and contemporary art practice. BFA candidates are accepted into that program via portfolio review and academic qualifications.

ART 102 - Foundation II 8 credit hours. All BFA students are required to take Foundations II, a series of four, rotating, topic-specific studio workshops conducted by Art & Design faculty. These workshops address 2-D, 3-D, and 4-D Concepts. Topics vary from year to year. BFA candidates are accepted into that program via portfolio review and academic qualifications. Prerequisite: ART 101.

ART 392 - Individual Projects with Foundations Faculty 2 to 4 credit hours. Project or media based independent study with a faculty member in the foundations division. This course can only be used for elective credit; it does not replace sophomore, junior or senior studio requirements. Approved Plan of Study required.

Art History

ARTH 120 - Topics in Art History: Non-western 2 credit hours. Selected topics in non-western art history are covered. Topics vary from term to term.

ARTH 126 - Buddhist Arts of Asia 2 credit hours. This course is an exploration of Buddhist iconography and ritual revealed in art and monuments from South, Southeast, and East Asia. The focus is on the generation of meaning through sculpture, painting, and architecture.

ARTH 127 - Arts of Ancient India 2 credit hours. This course examines the artistic and architectural highlights of India from Indus Valley Culture to the 16th Century CE. We view the architecture, sculpture, and monuments of Buddhism and Hinduism, two of India’s most ancient Religions.

ARTH 128 - Introduction to Material Culture 2 credit hours. This course is an introduction to the study of material culture from prehistory to the present in global perspective. Themes include power and civilization; pleasure and leisure; trade and status; and exploration and modernity.

ARTH 130 - Topics in Art History: Ancient to Baroque 2 credit hours. Selected topics art history from ancient to baroque are covered. Topics vary from term to term.

ARTH 133 - Renaissance and Baroque Art and Architecture: From the Classical Ideal to Theatrical Expression 2 credit hours. This course surveys the developments in architecture, sculpture and painting from the European Renaissance to Baroque periods (late 14th through 17th centuries). Works of art are studied as individual monuments related to the historical culture that produced them.

ARTH 136 - The Role of the Medieval Image 2 credit hours. This course surveys the influences and development of Christian art from its beginnings in the early Christian

period until the Gothic era by investigating the character and function of the image during the Middle Ages. Main themes include ritual, relics and veneration; pilgrimage; theology in art; and the age of cathedrals.

ARTH 137 - Ancient Art: History, Legend, and Legacy 2 credit hours. This course provides a critical survey of ancient art. We focus on the great empires of antiquity--Babylonian and Egyptian, Greek and Roman--that emerged in the Near East and Mediterranean region.

ARTH 140 - Topics in Art History: Modern 2 credit hours. Selected topics in modern art history are covered. Topics vary from term to term.

ARTH 141 - 20th Century Art 2 credit hours. This class will provide a critical introduction to modern art. It will trace the contexts of modern art movements and explore key themes. We will look at a wide-range of art genres, including painting, sculpture, and photography.

ARTH 143 - Art and Social Ideals 2 credit hours. This course will introduce students to the development of the concept of modernism in art and will focus on discussing examples of related utopian visions of an idealized past or an anticipated future.

ARTH 144 - The Ideal Body 2 credit hours.

ARTH 146 - Modern Sculpture 2 credit hours.

ARTH 149 - Photography and the Moving Image 2 credit hours. A survey of photography and moving image art from Daguerrotypes to Moholy-Nagy's innovative Bauhaus practice to contemporary video installation.

ARTH 200 - Topics in Art History 1 to 4 credit hours. Topics vary from semester to semester. May be repeated for credit.

ARTH 210 - Global Perspectives: Paris 2 credit hours. This course enables students to develop an understanding and appreciation of another culture, first in the classroom, and then two weeks in Paris. The focus is on history, art, and contemporary culture. Open to all students. Applicable as elective credit only toward the BFA and the B.S. in Art History and Theory; does not apply to art history requirements. (Cross-listed as FREN 210, GLBS 210)

ARTH 211 - Art in Our Time 3 credit hours. An examination of contemporary art amidst the global turn, uncovering how different artists, cultures, nationalities, and identities (mis)align in a fractured and globalized world. Should be taken Fall semester sophomore year.

ARTH 300 - Topics in Art History 4 credit hours. Topics vary from semester to semester. May be repeated for credit.

ARTH 304 - Global Arts: Contemporary Asia 4 credit hours. This course examines contemporary arts of Japan, China, North/South Korea, India, Pakistan, Tibet, and Vietnam, with a focus on emerging theories of global arts and diverse art practices, such as curating, viewing, and the making of Asian art today.

ARTH 305 - South Asian Arts 15-20c: Mughals to Modern 4 credit hours. This course examines the visual arts of the South Asian subcontinent from the Mughal period, in the 16th century, to modern art of the mid-20th century. In addition to religious and royal architecture, we view paintings, sculpture, courtly arts, prints and photography.

ARTH 306 - Arts of Japan 4 credit hours. This course is an introduction to Japanese visual arts, material culture, and architecture from prehistory to the present. Major

monuments of Japan are analyzed according to their historical, social, and religious contexts. A field trip to study objects in the Johnson Museum Collection at Cornell University is part of the course. (Cross-listed as GLBS 306)

ARTH 307 - East Asian Design and Material Culture 4 credit hours. This course is a survey of ceramics, wood, metalwork, textiles and product design from the 15th century to the present in China, Korea and Japan. Emphasis is on aesthetics, production systems, social worlds and craft discourse. Cross-listed as GLBS 307) (Offered Fall, odd years)

ARTH 321 - Greek and Roman Art and Architecture 4 credit hours. This course introduces the architecture, painting, sculpture, pottery and other forms of material culture from Ancient Greece and Rome to further our understanding of the foundations of western civilization and western approaches to art, beauty and civic planning.

ARTH 322 - Medieval Art and Architecture 4 credit hours. This course explores medieval art--architecture, painting, sculpture and the decorative arts--through the study of subject matter and the major stylistic developments from the religious and secular spheres of medieval society. Other topics include patronage; artistic production; and workshop practices.

ARTH 324 - Medieval Illuminated Manuscripts 4 credit hours. This course surveys the role and development of illuminated manuscripts—hand-written, painted books—in Western Europe beginning with the seventh century and ending in the fifteenth century with the invention of the printing press.

ARTH 331 - Italian Renaissance Art and Architecture 4 credit hours. This course is an in-depth study of the major stylistic forms, directions and iconography in Italian Renaissance art and architecture (14th through 16th centuries). We explore the systems of art-making and patronage in the major urban and court centers.

ARTH 332 - Northern Renaissance Art 4 credit hours. This course is an examination of Northern Renaissance art (France, Germany, the Netherlands and England) from the 1400s until about 1600. The period is marked by an increase in the materialism of religious faith, most notably observed in the extravagant artistic patronage by the royal courts and the Church.

ARTH 333 - Baroque Art and Architecture 4 credit hours. This class is a survey of European art and architecture during the 17th century within cultural, religious, political and intellectual frameworks. Main themes include: the impact of the Counter Reformation on the visual arts; urban planning; art as propaganda; specialization of the art market; rise of art academies and art theory.

ARTH 342 - Primitivism: A Western Perspective 4 credit hours. This course will investigate the issue of primitivism, one of the major topics in modernism. We examine the problematic nature of primitivism, specifically artists' involvement in the broader discourse of colonialism. The class will critique a variety of art practices--including photographic mapping, "black deco" spectacle, ethnographic Surrealism--ranging from the mid 19th century to the present. Prerequisite: ARTH 211.

ARTH 343 - Modern Art 4 credit hours. Encompassing the movements of Symbolism to Surrealism, this course covers the developments in modern art during the first half of the 20th Century. Students explore such themes as modernity, primitivism, and utopian theory as well as the stylistic developments and formal innovations of this period.

ARTH 344 - In the Studio: Modern and Contemporary Painting 4 credit hours. This course investigates the facture of painting--the marking, process, and surface of work--through a series of case-studies from the late 19th century to the present. It is designed for graduate students enrolled in the Alfred-Dusseldorf MFA Program and advanced undergraduates.

ARTH 351 - In, of, and around Contemporary Craft 4 credit hours. This course investigates the nature and place of craft in modern culture. We traverse a century of craft-based practices--from the artisan guilds of the Arts and Crafts Movement to the virtual guilds of today--focusing on recent strategies and practices. Prerequisite: one 100-level art history course.

ARTH 352 - Contemporary Projects in Art 4 credit hours. This interactive course focuses on and studies the projects of selected contemporary artists. These projects serve as platforms for investigating issues and problems related to various contemporary art forms and movements including, the embodiment of the viewer, play and reality, new technologies and consciousness, ironic modernism, and the critique of the post-medium condition. This course can be substituted for ARTH 211 in the BFA curriculum. Cannot enroll in if student has taken Topics: Global Contemporary Art Since 1989.

ARTH 354 - Recent Sculptural Practices 4 credit hours. A series of recent projects exploring contemporary issues in sculpture will be the focus of this class. We will be looking an international array of artists, including: Matthew Barney (United States), Robert Irwin (United States), Juan Munoz (Spain), Doris Salcedo (Colombia), Thomas Schutte (Germany), and Rachel Whiteread (Britain). The work of these artists will be examined in the context of larger post-war debates.

ARTH 355 - Picasso in Context 4 credit hours. This course offers an in-depth study of Picasso in relation to other modern artists and movements. Special attention is paid to the nature of style. Students conduct research on the development of abstraction in the early twentieth century.

ARTH 382 - Gender and Art History: Feminist Art in a Global Frame 4 credit hours. This course examines 20th and 21st century art and media that engage with feminist and gender issues in a global context. The first few weeks are spent reviewing a concise history of first- and second-wave feminist thought, particularly its relation to art and visual culture. Thereafter, selected contemporary art from all regions of the globe are covered. (Cross-listed as SJST 382, WGST 382)

ARTH 400 - Topics in Art History 4 credit hours. Topics vary from semester to semester. May be repeated for credit. Prerequisite: One 300-level art history course.

ARTH 420 - Islamic Art in the Mediterranean World 4 credit hours. This course traces the history of the art, architecture and culture of the Islamic world bordering the Mediterranean basin. Religious and secular works of art are examined in order to foster greater understanding and appreciation of Islamic visual culture and aesthetics.

ARTH 439 - History of Ceramic Art, Craft and Design: Global Flows 4 credit hours. In this course we examine the history of ceramic art, craft and design according to its major global flows. Recent scholarship, primary texts, and the direct study of objects from the Alfred Ceramic Art Museum collection form the basis for discussion of the history of ceramics' aesthetic values, praxis, patronage, and cultural identities. "Prerequisite: One 300-level art history course. Permission of instructor required for enrollment."

ARTH 445 - Understanding Culture through the Lens of World Cinema 4 credit hours. Through the lenses of various themes—youth, sexuality, class, religion, politics, revolution, time, and space—this course explores how different cultures throughout the world understand and communicate their cultural values through cinema.

ARTH 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

ARTH 460 - Exploring Art History: Concepts, Methods and Practices 4 credit hours. What do art historians do? This seminar investigates the foundational practices that have shaped the discipline of art history, including historiography, research methods, museum studies, curatorial practices, and art conservation. Field trips to regional museums, guest lectures, and object-based research.

ARTH 461 - Viewing Sculpture: Figurative, Modernist, Minimalist, Performative 4 credit hours. A close examination of the nature of sculptural viewing over the past 200 years. Sculptural theory is considered alongside contemporary artistic practice, ranging from Antonio Canova's neoclassical figures to Janet Cardiff's audio walks. Primary sources will be used for class discussion, along with Potts' "The Sculptural Imagination". In addition to thinking critically about the phenomenon of viewing, we will investigate the changing attitudes toward sculpture and the broadening definitions of three-dimensional work in the modern period. Prerequisite: One 300-level art history course.

ARTH 466 - Histories of Photography in the Non-Western World 4 credit hours. This seminar focuses on how photography and its modern modes of vision were disseminated and adapted around the globe since its 1839 invention in Europe. The course is designed as a research lab: students develop both a short written report and related visual project. (Cross-listed as GLBS 466)

ARTH 493 - Art in the Age of Digital Recursion 4 credit hours. A round-table seminar based on extensive group discussions and in-depth research on recent innovations in technology and how that technology has impacted art production and theory. Prerequisite: One 300-level art history course.

ARTH 499 - B.S. Thesis in Art History and Theory 2 credit hours. Capstone course open to graduating majors in Art History and Theory for the development of an article of publishable quality presented as a B.S. Thesis. Students write the thesis under the guidance of their thesis advisor. Prerequisite: Completion of at least five upper-division Art History courses and permission of major advisor.

GLBS 306 - Arts of Japan 4 credit hours. This course is an introduction to Japanese visual arts, material culture, and architecture from prehistory to the present. Major monuments of Japan are analyzed according to their historical, social, and religious contexts. A field trip to study objects in the Johnson Museum Collection at Cornell University is part of the course. (Cross-listed as ARTH 306)

GLBS 307 - East Asian Design and Material Culture 4 credit hours. This course is a survey of ceramics, wood, metalwork, textiles and product design from the 15th century to the present in China, Korea and Japan. Emphasis is on aesthetics, production systems, social worlds and craft discourse. (Cross-listed as ARTH 307) (Offered Fall, odd years)

GLBS 466 - Histories of Photography in the Non-Western World 4 credit hours. This seminar focuses on how photography and its modern modes of vision were disseminated and adapted around the globe since its 1839 invention in Europe. The

course is designed as a research lab: students develop both a short written report and related visual project. (Cross-listed as ARTH 466)

SJST 382 - Gender and Art History: Feminist Art in a Global Frame 4 credit hours. This course examines 20th and 21st century art and media that engage with feminist and gender issues in a global context. The first few weeks are spent reviewing a concise history of first- and second-wave feminist thought, particularly its relation to art and visual culture. Thereafter, selected contemporary art from all regions of the globe are covered. Cross-listed as ARTH 382, WGST 382)

WGST 382 - Gender and Art History: Feminist Art in a Global Frame 4 credit hours. This course examines 20th and 21st century art and media that engage with feminist and gender issues in a global context. The first few weeks are spent reviewing a concise history of first- and second-wave feminist thought, particularly its relation to art and visual culture. Thereafter, selected contemporary art from all regions of the globe are covered. (Cross-listed as ARTH 382, SJST 382)

Ceramic Art

ART 151 - Beginning Ceramics 4 credit hours. This course offers a preliminary approach to ceramics for students not enrolled in the BFA program. Students are introduced to fundamental methods of making, decorating, and firing. Additional work outside of class required.

ART 201 - Introduction to Handbuilding 4 credit hours. This course covers an extensive range of clay construction processes exclusive of the wheel. Fundamental problems in ceramics such as timing, gravity and weight are experienced in assignments that explore basic sculptural concepts. Students are introduced to historic and contemporary models to understand the possibilities offered by ceramic materials. Basic ceramic processes from glaze mixing to kiln firing are experienced within the context of experimental materials exploration.

ART 203 - Introduction to Wheel 4 credit hours. In this course, the potter's wheel is used as the forming process for making vessels expressive of the visual, tactile, and intellectual possibilities available through the medium. Provided is a direct experience with process and materials that teach necessary skills and techniques to enable students to correlate the hand and eye with the mind. The objective of the course is to help students develop creative ideas and concepts into works of art. Historical references are also explored.(Fall and Spring)

ART 301 - Ceramic Sculpture I 4 credit hours. This course emphasizes the rigorous development of conceptual skills with the goal of developing an individual approach to a full integration of ideas, material and process. Students are encouraged to experiment with different strategies, including installation work, mixed-media projects, and a variety of traditional ceramic techniques. Construction and firing techniques are explored as well. Prerequisite: ART 201 or 202. (Fall and Spring)

ART 302 - Ceramic Sculpture II 4 credit hours. Continuation of ART 301. Prerequisite: ART 201 or 202.

ART 303 - Ceramic Tile 4 credit hours. Ceramic tile is a potent form of artistic inquiry that offers students an alternative approach to clay not covered in traditional pottery or sculpture courses. The course challenges assumptions about tile, presenting ideas of space, shape modulation, movement, repetition, density, image, color and texture.

Students will address problems involved in planning, fabricating, and installing large projects. Prerequisite: ART 201 or 202. (Fall or Spring)

ART 305 - Ceramic Pottery I 4 credit hours. Through an exploration of pottery form this course addresses artistic inquiry, studio practice, and the genre of functional ceramics. Issues relative to ceramic history, contemporary material culture, and craft theory are part of the dialogue. Primarily wheel based, these classes may also include casting and handbuilding systems. Prerequisite: ART 203. (Fall and Spring)

ART 306 - Ceramic Pottery II 4 credit hours. Continuation of Ceramic Pottery I. Prerequisite: ART 203; ART 305 recommended. (Spring)

ART 307 - Design ! Ceramics 4 credit hours. The production process is a central determining factor in the identity of any object. Use, feel, size, density, form, texture and color are all directly influenced by the process' characteristics. In this course we modify, adapt and combine methods of production as a way of defining and influencing the object made. The use of molds and creating series of work are central to the course. Both sculptural and utilitarian modes of thinking are welcome.

ART 309 - Ceramic Systems II 4 credit hours. A further study of ceramic systems. ART 307 recommended.

ART 380 - Alfred Summer Ceramics 4 credit hours. This summer course offers 4-weeks of comprehensive ceramic art experience. Students can enroll in the 4-week open studio intensive or two consecutive 2-week sessions. Students work independently with faculty oversight and guidance from Graduate Teaching Assistants. Individual work space is provided with wheels, tables and other basic equipment. Personal Development is emphasized. (This course may be taken twice for credit.)

ART 382 - Ceramic Materials I: Claybodies and Glazes 4 credit hours. This course covers the fundamentals of body and glaze development focusing on ceramic raw materials and their role in forming and firing for functional ware and sculpture bodies. Glaze formulations are also discussed, including glaze chemistry, texture, and causes of common defects. (Fall)

ART 383 - Ceramic Materials II: Problem Solving for Artists 4 credit hours. This is an open forum discussion-based course that builds on ART 382-Ceramic Materials I and stresses the application of ideas and concepts to solve studio problems. Students are expected to participate in the discussion, to bring examples of problems, and share the results of experiments to rectify those problems. Prerequisite: ART 382. (Spring)

ART 387 - Tools/Strategies: Digital Design/Fabrication 4 credit hours. This course will introduce CAD software and related applications for design and fabrication in multiple materials. Fluidity between digital technologies and existing studio techniques will be stressed. This elective course can benefit students at all levels.

ART 390 - Methods of Digital Output 2 credit hours. This course compliments ART 387-Intro to 3D modeling and Rapid Prototyping, allowing the student to acquire a practical application for 3D modeling through use of CAD (SolidWorks, Rhino), CAM (Delcam for SolidWorks, RhinoCam and Mastercam), and reverse engineering software (Rapidworks, Scanstudio). Students learn technical competency in contemporary technology for 3D fabrication. Prerequisite: ART 387 or ENGR 102. May be repeated one time for credit (up to a total of 4 credit hours).

ART 393 - Ceramic Art Individual Projects 2 to 4 credit hours. Project or media based independent study with a faculty member in the ceramic art division. This course can

only be used for elective credit; it does not replace sophomore, junior or senior studio requirements. Approved Plan of Study required.

ART 399 - Glaze Effects and Color 4 credit hours. This course examines the nature and properties of materials that create special effects and color in glazes, with an intensive approach to the study and analysis of glazes. When taught as on online hybrid in a Fall or Spring semester, the course combines online instruction with a required on-campus laboratory component (ART 399L). There is no on-campus lab component when taught as an online course in Allen Term or Summer Term. May be repeated one time for credit (a total of 8 credit hours).

ART 484 - Introduction to Kiln Procedures and Construction 4 credit hours. The focus of this lab/lecture course is the operation, maintenance and design of ceramic art based kilns. Discourses include: kiln theory, combustion, fuels, refractory materials, basic electrical theory and construction. Students design their own kiln using blueprints, calculations for heat input and a material source list.

Dean's Office SOAD

ART 200 - Special Topics in Art 2 to 4 credit hours. Theory or other elective credit topics are explored Does not count toward BFA studio requirements.

ART 289 - Robert C. Turner Gallery Internship 1 to 3 credit hours. Students work as interns in various capacities to provide creative leadership, programming, and management of the Robert C. Turner Gallery, the student-run gallery of the School of Art and Design. The instructor of record provides oversight and evaluation of internship activities. Repeatable for credit up to a total of 6.00 credit hours. Prerequisite: sophomore standing.

ART 293 - The Business of Art: Professional Practices 3 credit hours. This is a lecture-based study that explores the practical applications of the business of art including presentation, documentation and career planning specific to studio art. This course covers professional practices in the fine art world as appropriate to emerging artists by providing a foundation of practical information to assist undergraduate and graduate studio majors in building a successful career.

ART 294 - Art Force 5: Social Justice Research, Design, Outreach 2 credit hours. This course will research and design community-based art, with each semester focusing on a different historical theme. Past themes have included suffragist movement, the Harlem Hellfighters, Harlem Renaissance. Students research assigned individuals and design one community outreach project to serve an identified community. (Offered Fall, Spring) (Cross-listed as SJST 294)

ART 300 - Special Topics in Art-Studio Requirement 1 to 4 credit hours. Topics and issues not covered in other junior studio courses are explored. Counts toward BFA studio requirement.

ART 385 - Internship 1 to 4 credit hours.

ART 389 - Exhibition Design 2 credit hours. This course is an introduction to concepts, skills, and methods required to design and install exhibitions of contemporary art in professional museum and gallery settings. Topics covered include exhibition planning, concept design, technical lighting, and proper handling, storage, and installation of artwork. Student gain firsthand experience installing an exhibition at the Cohen Art Center and proposing a mock exhibition for the Fosdick-Nelson Gallery with drawings

and scale models. Field trips to area museums and galleries provide additional opportunities to study and analyze exhibition design and to meet with professional museum and gallery preparatory and curatorial staff.

ART 391 - Special Topics-Elective Credit 1 to 4 credit hours. Special topics that count only as elective credit toward the BFA or as additional studio credits are offered. Topics vary from term to term.

ART 400 - Special Topics in Art 1 to 4 credit hours. Theory or other elective credit topics are explored. Does not count toward BFA studio requirements.

ART 401 - Senior Studio 4 to 6 credit hours. Senior-level studio content involves individually driven studio practice and research guided by weekly meetings with studio advisors. Senior Studio culminates in the Senior Show as a capstone project that also includes an artist’s statement and an exhibition project statement.

ART 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

ART 499 - Senior Show 0 credit hours. The culminating exhibit for the BFA degree. Prerequisite: 68-72 studio credit hours earned and senior standing in the BFA program.

SJST 294 - Art Force 5: Social Justice Research, Design, Outreach 2 credit hours. This course will research and design community-based art, with each semester focusing on a different historical theme. Past themes have included suffragist movement, the Harlem Hellfighters, Harlem Renaissance. Students research assigned individuals and design one community outreach project to serve an identified community. (Offered Fall, Spring) (Cross-listed as ART 294)

Drawing/Painting/Photography

ART 111 - Beginning Drawing 4 credit hours. Studio work in painting and drawing. A general course for beginners investigating the individual's ideas in various media.

ART 133 - Beginning Photography 4 credit hours. The focus of this course is basic digital photography skills including camera function, color correction, organizing and editing images and inkjet printing. Through assignments, discussion of readings, lectures on historic and contemporary artists using photography, and critiques, students examine how photographs function in order to engage in critical discourse with the medium. A fully manual, digital single lens reflex camera (DSLR) and portable hard drive are required.

ART 218 - Introduction to Photography 4 credit hours. This course focuses on basic digital photography skills including camera function, color correction, organizing and editing images and inkjet printing. Through assignments, reading discussion, lecture and critique, students examine how photographs function in order to engage in critical discourse with the medium. A fully manual digital single lens reflex camera (DSLR) and a portable hard drive are required.

ART 246 - Introduction to Painting 4 credit hours. In this course students will be introduced to painting within a structure that allows for the concurrent development of their technical and conceptual skills. Through a series of projects designed to explore the richness of painting in oil and/or water media, student will work towards proficiency with paint and gain confidence in the production and realization of ideas. Work will be done from observation, from the imagination, and from a variety of viewpoint and

techniques. Discussions, reading, field trips, and critiques will enhance student's knowledge of the critical dialogs surrounding painting, and will expand the notion of what painting can be.

ART 282 - Figure Drawing 4 credit hours. A study of the expressive possibilities of the human form through drawing. Students will explore the figure in many ways with a variety of drawing media. From anatomical study and gesture to portraiture and narrative, this course will investigate the powerful history of figurative art and its potential for individual expression. Fundamental drawing and visual language skills are stressed. This course fulfills the drawing requirement. Prerequisite: Completion of an Art Foundation Program or permission of instructor.

ART 283 - Drawing: Observation to Abstraction 4 credit hours. An investigation of the ways in which perceptual study can lead to pure abstraction. Through observational drawing and formal analysis, students will discover the abstract principles that exist in all visual imagery. Assignments cover a broad range of drawing techniques and concepts including biomorphic, geometric, and conceptual abstraction. The potential for abstraction to communicate ideas will be explored. Fundamental drawing and visual language skills are stressed. This course fulfills the drawing requirement. Prerequisite: Completion of an Art Foundation Program or permission of instructor.

ART 284 - Drawing: Analyzing Nature 4 credit hours. This course covers both technical and conceptual aspects of drawing through the investigation and analysis of natural forms. Subjects range from found objects in nature to microscopic materials, the landscape, and the human body. Emphasis is placed on integrating technical mastery of the visual elements of drawing with expressive content, while working with a wide variety of materials. Fundamental drawing and visual language skills are stressed. This course fulfills the drawing requirement. Prerequisite: Completion of an Art Foundation Program or permission of instructor.

ART 321 - View Camera 4 credit hours. This course introduces students to black and white darkroom photography through the use of large-format cameras. Using monorail, 4x5 view cameras students learn the mechanics of the camera, develop new sheet film and make silver gelatin prints. Through lectures on contemporary artists, videos and related readings, students begin to synthesize technique and concept by developing their own projects. View cameras are provided. Prerequisite: ART 218.

ART 322 - Advanced Digital Photography 4 credit hours. This course provides an opportunity for students to go deeper into the digital skills they acquired in the introductory photography course. Advanced digital editing, including tablet use, Photoshop, and layers and masks, offer students the possibility of creating seamless manipulations and the opportunity to explore the full potential of the digital platform. These techniques are presented through discussion of contemporary practice and culture. Prerequisite: ART 218.

ART 324 - Contemporary Photographic Practice 4 credit hours. This course explores the role of the contemporary photographer as maker, critic and organizer. Emphasis is placed on research and writing in conjunction with image making. As an introduction to independent studio work, students are expected to produce work regularly and critique of new work takes place every other week. Prerequisite: ART 218.

ART 331 - The Photo Book 4 credit hours. For many artists the photography book has become a significant vehicle for the display of their work and the communication of their vision to an audience. This course will investigate the potential of photographic

description and representation in the form of a book. Through image-making exercises and prompts, assignments, readings, films, lectures, and visiting artists, students will explore various methods of photographic inquiry including but not limited to: documentary and fiction, fabricated images, the snapshot, and narrative construction. Students will follow the stages of creating a finalized photography book from idea, to image making, and image selection to strategies in sequencing. We will experiment and produce the books in multiple modes of production. Throughout the semester there will be a series of lectures which will present works of artists, artistic movements and key exhibitions around the photography book.

ART 346 - Junior Painting 4 credit hours. Junior painting involves intensive exploration into issues of painting and drawing with emphasis on the beginnings of each student's unique means of expression. It is a continuation of the basic painting experience begun in the sophomore year with concentration on problem solving through structured assignments. Students are encouraged to find ways of approaching common experience as well as developing independent work. Sessions are complimented by readings, critiques, presentations, and field trips. May be repeated. Course content varies from instructor to instructor. Prerequisite: ART 246. (Fall and Spring)

ART 348 - Junior - Mixing Materials 4 credit hours. From Picasso's cubist collages to Anselem Keifer's lead and straw works, the class combines both traditional and non-traditional painting and drawing materials that enhance narrative structures, work as metaphoric transformations, and the creation of formal dynamic juxtapositions. Projects are designed to encourage exploration of new realms of expression. Prerequisite: ART 246. (Spring)

ART 349 - Water-based Media 4 credit hours. Students explore the use of watercolor, gouache, acrylic, and egg tempera and experiment with various supports and surfaces, including paper, grounds, canvas, panel, and more. Prerequisite: ART 246.

ART 381 - Advanced Drawing 4 credit hours. A topical course providing students an intense immersion in both observational and conceptual drawing practices. Topics may include figure drawing, nature drawing, and drawing systems. May be repeated once for credit, preferably with a different instructor. Course content varies from instructor to instructor. (Fall)

ART 384 - Studio Lighting 2 credit hours. Principles of light and the clean-slate nature of the studio will be explored, along with subject, background, and studio tools. Digital camera fluency will provide necessary feedback. A self-directed project is required. Prerequisite: ART 218.

ART 396 - Drawing, Painting, or Photography Individual Projects 2 to 4 credit hours. Project or media based independent study with a faculty member in the drawing, painting, photography division. This course can only be used for elective credit; it does not replace sophomore, junior or senior studio requirements. Approved Plan of Study required.

Expanded Media

ART 161 - Beginning Printmaking 4 credit hours. Students are introduced to the medium and language of printmaking through hands-on demonstrations and technical and conceptual assignments. Discussions, critiques, readings and slide shows/movies add to the student's knowledge of printmaking and expose students to the versatility of the medium.

ART 212 - Introduction to Design Studio: Type and Image 4 credit hours. This core design studio course introduces students to graphic design through hands-on and process-oriented studio practice. A series of projects and exercises explore typography image-making. Emphasis is on visual literacy, critical thinking, craft, and empathy for audience experience. Problem solving embraces a wide variety of tools and materials. Studio practice includes digital equipment and design-related software such as InDesign, Photoshop, and Illustrator.

ART 213 - Introduction to Integrative Graphic Design 4 credit hours. Using professional digital imaging tools, this introductory course allows students to work creatively in the production of design-oriented projects including: motion graphics, typography, concrete poetry, poster design and vector systems. Students explore handmade techniques as well as digital. The course emphasizes both experimental and commercial research.

ART 214 - Introduction to Speculative Illustration & Design 4 credit hours. Speculative Illustration & Design is an introductory course that establishes foundational understandings of art-based practices that bridge emerging science and technology through the lens of artistic investigation, future fictions, and worlding. Students will incorporate principles of design to explore the role of creativity in the applications of speculative visions to real world problems. Students will explore a multitude of practices that unravel, subvert, transplant, or disrupt dominate visual codes, these disruptions will in turn allow new visual languages to grow, flower and bloom into personal Illustration and Design Languages. Practices will include, glitch, XY plotters, augmented reality, VR (virtual reality), data visualization, character design, & integrative design techniques.

ART 225 - Introduction to Print Media 4 credit hours. This course is focused on image making and image processing in relation to experiencing a broad range of printmaking processes and forms. It provides an introduction to the tools, technologies, and concepts necessary to develop the skills to make images within a contemporary print framework. Practices including woodcut, etching, lithography, monoprints, and new digital inkjet print technologies will be investigated. Printed images will evolve by working with a combination of hand and digital processes, with ink and with computer software, thus allowing the print to be understood as both physical and electronic process. Ideas inherent to the process of printmaking such as reproduction, translation, synthesis, remixing, proofing, recombination, and collage form the basis for discussion and inquiry. (Fall and Spring)

ART 232 - Introduction to New Media 4 credit hours. This course introduces the creative, technical and theoretical experience needed to explore video art, sonic composition and new media systems. Works take form as video works, experimental music, sound design, and introductory 3D animation. Experimentation is emphasized and students explore a wide range of digital, electronic and traditional art-making tools. No experience with computers or music composition required.

ART 285 - Digital Drawing 4 credit hours. This course promotes an approach to drawing using digital formats that push the concept of computer beyond its status of "tool". We approach the computer as a creative partner seeking answers to the questions most appropriate for its use in drawing. Newly developed technique and vocabularies will be explored, including raster drawing, micro marking, pixel displacement, wave set processing, gradient manipulations, spectral graphics, autopoiesis, non-destructive editing, data base collage, aleatoric composition, tweening animation, video still frame manipulation, and serialism. Traditional drawing tools are

used alongside experimental approaches. Prerequisite: Art Foundation Program (ART 101/102)

ART 312 - Design Studio: Typography 4 credit hours. This course focuses on type as image, type as information, and the interaction of type and image. We explore letterforms and writing systems propelled by the human need to represent things, to represent ideas, and to express ourselves. Projects include a variety of traditional and digital media. Students work with design-related software including InDesign, Illustrator, Photoshop, Dreamweaver, and FontLab. Prerequisite: ART 211 or permission of instructor.

ART 316 - Design and Marketing 4 credit hours. In this course we focus on how the processes, tools and practices of design and marketing work together to support and enhance business goals. Students work with the elements and principles of design to communicate an intended message to an intended target audience. Students also experience the creative and strategic power of the design process. Design and marketing faculty participate in lectures and demonstrations. The semester culminates in an integrated marketing campaign for a not-for-profit entity. This junior studio course is open to Art students and to Marketing majors and minors.

ART 325 - Advanced Print Media 4 credit hours. An extensive investigation into the traditional and non-traditional uses of materials and processes that grow out of the concepts inherent in kinetic, photographic and electronic printmaking processes. The focus is on issues involving specific forms of print media (book, print-suite, single print, mass production, CD-ROM, print installation). Time and instruction provided help to deepen students experience in one or more printmaking processes including etching, lithography, woodcut, and digital inkjet technologies. Content varies from instructor to instructor. At least one Sophomore Design, Video/Sonic, or Print Media Studio is required or permission of instructor. ART 225 highly recommended. May be repeated once for credit. (Fall and Spring)

ART 328 - Artists Multiples 4 credit hours. This advanced course explores ideas about artists' books and a wide range of printed multiple forms including objects, installations, CD-ROM and DVD. The notion of the multiple is explored in contrast to the traditional fine art print. Offset printing, traditional processes, and new emerging technologies will be utilized to produce work. Ideas inherent to the process of printmaking such as reproduction, translation, synthesis, remixing, proofing, recombination and collage will form the basis for discussion and inquiry At least one Sophomore Design, Video/Sonic, or Print Media Studio is required or permission of instructor. ART 225 highly recommended (Spring)

ART 329 - Digital Print Media 4 credit hours. An exploration of printing activities and techniques that question and expand the interfaces of the traditional print media of lithography, woodcut, and etching with contemporary digital imaging activities and techniques. Through the making of work we will look at how digital technologies affect the contemporary vocabulary of printmaking. We work with moving and still images and with images on paper as well as on the internet. We make, send and receive images as ways of understanding how ideas about print media are expanding, how these same ideas have historically been rooted in notions about communication, and how we can conceive and make print translations that cross traditional media. Prerequisite: At least one Expanded Media Sophomore Design, Video/Sonic, or Print Media Studio or permission of instructor. ART 225 highly recommended. (Fall)

ART 332 - Advanced Video Arts 4 credit hours. This course allows students to explore: video and sound production, video and sound editing, immersive video installation, video image processing and multi-channel video and sound projection. Students explore a wide range of contemporary and vintage electronic systems. Prerequisite: ART 232 or permission of instructor. May be repeated once for credit. (Fall and Spring)

ART 335 - Interactive Media Studio 4 credit hours. Explore technological processes that expand and complicate relationships of art and audience. Design responsive environments, 3D stereographics, "augmented realities" onsite and across networks. Develop generative systems that visualize, sonify, or animate data. Make your own software for "live cinema" performance. Prerequisite: One sophomore-level studio art course or permission of instructor.

ART 336 - Generative and Interactive Animation 4 credit hours. In this course students create dynamic motion graphics and animations in 2D and 3D spaces. We explore modeling techniques; applying models as virtual components of either cinematic or fully-abstract world of entities with behaviors – culminating in generative animations, data visualizations, and interactive games. May be repeated one time for credit. Prerequisite: One of ART 285, ART 335, ART 340; or permission of instructor.

ART 339 - Sonic Art 4 credit hours. In this course students learn to find, edit, process and combine sounds in many different ways. Coursework culminates in projects such as (but not limited to) radio play, sound for dance, ambient music, techno, folly sound and experimental electronic composition. No prerequisite and no experience in music or computers required.

ART 340 - Design for Web and Mobile Devices 4 credit hours. This course introduces students to the building blocks of design for the web and screen-based media. Students explore the application of design principles and the design process for screen-based media with emphasis on content, aesthetics, user experience and craftsmanship. Students learn the basics of computer languages for interactive graphic design. Exercises and projects develop skills in software applications including InDesign, Photoshop, Illustrator and Dreamweaver.

ART 388 - Methods in Electronic Arts 2 credit hours. This elective course is designed to introduce students to the primary software applications and concepts used in the preparation of a wide variety of print and digital media. The course will focus on acquiring the skills necessary to move easily between the most relevant page layout, imaging, video and sound software as well as developing skills in digital file and digital color management. This course is open to all students interested in expanding their knowledge and expertise of software used in the digital arts. It is strongly recommended for beginning as well as advanced students working in Design, Print Media, Sonic, Video and Interactive Arts. (Fall or Spring)

ART 395 - Expanded Media Individual Projects 2 to 4 credit hours. Project or media based independent study with a faculty member in the expanded media division. This course can only be used for elective credit; it does not replace sophomore, junior or senior studio requirements. Approved Plan of Study required.

General Education

ART 100 - Special Topics in Art 2 to 4 credit hours.

Sculpture/Dimensional Studies

ART 121 - Beginning Sculpture 4 credit hours. A course focusing on idea development, using both traditional and nontraditional three-dimensional materials.

ART 122 - Beginning Glass Studio 4 credit hours. A course focusing on idea development using both traditional and non-traditional three-dimensional applications of blown, slumped, and cast glass.

ART 255 - Introduction to Sculpture 4 credit hours. An introduction to the possibilities associated with contemporary sculptural practice, with an emphasis on the development of ideas and conceptual reasoning, and the safe usage of materials and processes. A wide range of techniques will be covered, including structure and fabrication, mold making and casting, and the consideration of space, site, interaction, and context. May not be repeated for credit. (Fall and Spring)

ART 262 - Introduction to Glass 4 credit hours. This course offers a survey of glass working techniques with an emphasis on conceptual development and material manipulation. Technical demonstrations in glass blowing, hot glass casting, kiln forming, and cold manipulation will be combined with conceptually based projects to create contemporary sculpture.

ART 265 - Summer Glass I 2 or 4 credit hours. This is an intensive course in glassblowing. Emphasis is on personal expression and skill development. Demonstrations, slides, and lectures center on traditional and non-traditional glass working techniques for the artist. Open to all levels. (Offered only in Summer; counts as elective or additional studio credit only)

ART 266 - Summer Glass II 4 credit hours. This class incorporates various ways to cast glass using methodologies tailored to the beginning and intermediate student. Using hot casting, kiln forming, ZirCar ceramic shell and pate de verre, the student is exposed to a varied breadth of techniques within this intensive, condensed course. (Offered only in Summer; counts as elective or additional studio credit only)

ART 268 - Summer Glass: Cast Light 4 credit hours. This is an intensive course covering cast glass, color theory, the therapeutic effects of colored light, and approaches and applications for at and design. Demonstrations include a broad range of techniques including flow casting, sand casting, resin bonded sand molds, cold working, and more. (Offered only in Summer; counts as elective or additional studio credit only)

ART 290 - Wood Studio Practicum 2 credit hours. This course is an in depth investigation into wood fabrication useful to artists and designers. Open to all School of Art and Design students. May be repeated once for credit.

ART 291 - Metal Studio Practicum 2 credit hours. This course is an in depth investigation into metal fabrication useful to artists and designers. Open to all School of Art and Design students. May be repeated once for credit.

ART 355 - Sculpture Foundry: From Miniature to Monumental 4 credit hours. This junior level course examines the process and practice of contemporary cast metal sculpture. The aim is to provide a platform to develop and push the boundaries related to the art of Foundry. In a critically engaged studio environment, students develop concepts and explore casting in bronze, iron, steel, copper, aluminum, while engaging with a variety of mold-making and construction techniques, including lost wax and the

patination of metals. Individual or collaborative projects from miniature to monumental may include object-based work or site-specific installations. May be taken twice for credit. Prerequisite: ART 255.

ART 361 - Glass Blowing 4 credit hours. An intermediate-level exploration of glass and combinations of glass and other media as they apply to sculpture. Concentration in hot glass and glass blowing techniques (including color techniques), and mold making. Projects are developed to foster self-determination of ideas in relation to media. Prerequisite: ART 262.

ART 362 - Advanced Glass Blowing 4 credit hours. A continuation of ART 361 that further develops personal expression in glass sculpture. Processes include glass blowing, solid working, mold making, and color, utilizing high-temperature glass enamels. Prerequisite: ART 361. (Spring)

ART 363 - Glass and Light 4 credit hours. This course is an in-depth investigation into the potential of light as a material and a comprehensive introduction to working with luminous tube technology --a normally commercial process--as a means of sculptural expression. The course examines neon's potential in combination with other materials both traditional and non-traditional as well as sealing, bending, processing of neon tubes, safe installation, and wiring. No prerequisite. (Spring)

ART 364 - Glass Casting 4 credit hours. An introductory investigation of personal expression through cast glass sculpture with an emphasis on mold making. Students learn open-faced solid glass casting using both loose and rigid sand molds. Topics range from the object and figurative sculpture to geometric abstraction and site-specific environments. (Fall)

ART 368 - Light and Mixed Media 4 credit hours. This course explores the aesthetic and conceptual possibilities of light and mixed media. Using traditional and non-traditional methods of neon-making, the emphasis is placed on the tension between contrasting materials when creating artworks.

ART 373 - Material Poetics in Dimensional Studies 4 credit hours. This course explores the relationship between material and meaning. Projects investigate the significant use of materials and context in service to ideas and develop material vocabulary as a means to shape the viewing experience. Prerequisite: ART 255 or permission of instructor.

ART 374 - Advanced Paper/Mixed Media 4 credit hours. Advanced Paper/Mixed Media involves intensive exploration into issues of art making with emphasis on the development of each student's unique means of expression. The course concentrates on problem solving, development of ideas, and conceptual possibilities within the contemporary art practice.

ART 375 - Space and Place 4 credit hours. This course explores the use of space (physical) and place (contextual) as materials for expression. Through experiential site research, students create installations, site-specific interventions, and public works. Making use of a variety of sculptural materials and processes they fit the needs of the projects and investigating site as an inspiration, venue, and medium. Prerequisite: ART 255 or permission of instructor.

ART 378 - Art and Ecology 4 credit hours. This class explores the intersection of art and ecology through the critical inquiry of student-directed investigations. Topics covered may include ecology, environmental art, sustainability, and community

activism responding to local ecological issues through use of creative methodologies. Prerequisite: ART 255 or permission of instructor.

ART 394 - Sculpture and Dimensional Studies Individual Projects 2 to 4 credit hours. Project or media based independent study with a faculty member in the sculpture and dimensional studies division. This course can only be used for elective credit; it does not replace sophomore, junior or senior studio requirements. Approved Plan of Study required.

ART 397 - Glassartengine 2 credit hours. This is an interdisciplinary course between glass engineering students and glass art students. The course is taught by various faculty across both areas combining both technologies and philosophies to foster collaborations yielding unknown results. (Studio elective for art students; Technical Elective for engineering students.) May be repeated for credit up to a total of 8 credit hours. Prerequisite: One junior glass course (ART 361-366). (Cross-listed as CEMS 397)

Division of Performing Arts Courses

General Education

PDAT 228 - Costume Design for Dance 2 credit hours. This practice-based course is about designing costuming for modern dance. Students will learn to collaborate and communicate with choreographers, dancers, and costume builders to design a costume concept for a specific piece that will be performed in the Spring AU Dance Theater Concert. Course content includes gaining knowledge of fabrics, styles, and colors. Students will also gain experience in basic skills like taking measurements, along with learning how to sketch the body.

Performing Arts

DANC 120 - Fundamentals of Dance 2 credit hours. Introduces new and continuing dance students to the art of dance with an emphasis on alignment, strength, and flexibility of the whole body. Dancers are challenged to develop their physical intelligence and artistic expression in center and across the floor combinations using a wide range of dynamics and rhythms.

DANC 200 - Special Topics in Dance 1 to 4 credit hours. Courses offered according to students' interests. Topics vary from year to year. (Sufficient demand)

DANC 211 - Dance History 4 credit hours. A study of the historical development of dance from mid-eighteenth century to the twenty-first century with an investigation of the dance works, artists, and the historical context in which the works were created. Course will include discussion, viewings of live performance and videos, lectures, and experiential activities.

DANC 222 - Modern Dance I 2 credit hours. An introductory course in various modern dance techniques including some improvisational work. May be repeated one time for credit. Prerequisite: DANC 120 or permission of instructor.

DANC 223 - Jazz Dance I 2 credit hours. An introductory course in jazz dance technique incorporating performing aspects of the jazz medium.

DANC 224 - Contact Improvisation 2 credit hours. Students learn to use the physical properties of weight, momentum, countertension and speed to provoke spontaneous, fully-embodied dancing. This studio class introduces basic principles and patterns, such as exchanging weight with a partner, that lead to increasingly complex and daring movement. Working individually, with partners, and in groups, students learn to make alert and intelligent movement decisions as they improvise. Prerequisite: DANC 120 or permission of instructor.

DANC 225 - Laban Movement Studies 2 credit hours. This course provides a moving introduction to Laban/Bartenieff Movement Analysis.Students learn and develop proficiency in the L/BMA framework, focusing on the categories of Body, Effort, Shape and Space, as well as historical information and current uses. Prerequisite: DANC 120 or permission of instructor.

DANC 226 - Hip Hop Dance 2 credit hours. This beginning level dance course introduces the fundamental values, practices and movements of hip hop dance. This

course will focus on foundations and origins of hip-hop and street dance culture, and how each relates to today's current definitions of hip hop and freestyle dance.

DANC 230 - Improvisation/Composition I 3 credit hours. A laboratory for developing skills as a choreographer and improviser. Emphasis on generating movement vocabulary through improvisation and understanding of dance elements (time, space, energy) for composition. Dance studies are created and performed throughout the semester. Prerequisite: DANC 120.

DANC 270 - Alfred University Dance Theatre 2 credit hours. The AU Dance Theatre presents students with the opportunity to engage in learning and performing a variety of dance works choreographed by faculty, guest artists and fellow students. AU Dance Theatre presents one work-in-progress "showing" and one concert each year. Participation is open to all students. Prerequisite: DANC 230 and DANC 330, or permission of instructor.

DANC 322 - Modern Dance II 2 credit hours. An extension of the beginning course, continued instruction is given in dance forms, movement, awareness, technique and patterns. May be repeated 4 times for credit to a maximum of 10 credit hours. Prerequisite: DANC 222 or equivalent experience to be judged by the instructor. (PE) (PFIT)

DANC 323 - Jazz Dance II 2 credit hours. A continuation of the beginning course for students already able to move within the jazz idiom. It includes more advanced work in jazz technique as well as combinations. May be repeated 4 times for credit to a maximum of 10 credit hours. Prerequisite: DANC 223.

DANC 325 - Laban Movement Applications 2 credit hours. This course supplements the Laban/Barteneiff Movement Practicum course offered congruently and allows advanced students to pursue rigorous theoretical investigations and application of the Laban/Bartenieff material.,The projects throughout the semester focus on application of L/BMA to student's area of interest.(Co-requisite: DANC 225)

DANC 330 - Improvisation/Composition II 3 credit hours. A laboratory for developing skills as a choreographer. Dance compositions are created and performed at the end of the semester. Emphasis on continuing development of the individual "voice" of the choreographer and the ability of the choreographer to "see" dance. Prerequisite: DANC 230 or 330 and one of the following: DANC 120, 221, 222, or 223; or permission of instructor.

DANC 331 - Site Specific Composition 3 credit hours. In this studio course students explore place/space as inspiration for creating performance-based compositions. How can the specifics of a space inspire imagination to inspire movement composition and performance? Students also study the works of contemporary site-specific artists. Prerequisite: Completion of one art foundations course (ART 101 or IART 101), DANC 230, or permission of instructor.

DANC 340 - New and Existing Repertory 3 credit hours. In this course students learn existing dance repertory and are involved in creating new dance works. Through the rehearsal process, informal performances and research students explore a variety of rehearsal techniques, explore the varying roles of the dancer in the creative process, develop performing skills, and deepen their understanding of the choreography and the choreographers who created the work. Students are required to perform these works for the AU community throughout the semester. Prerequisite: Two dance courses or permission of instructor.

DANC 370 - Choreographic Practicum 1 to 3 credit hours. This course provides the advanced student with the opportunity to choreograph new dance works under faculty supervision. Prerequisite: DANC 230 and permission of instructor. Repeatable up to six credits.

DANC 385 - Dance Internship 4 credit hours. An off-campus, independent study project in which the student gains insight from experiencing actual tasks and responsibilities undertaken and performed by persons in the dance field. At completion, a journal and final report is submitted to the faculty sponsor. Prerequisite: junior standing and permission of instructor.

DANC 450 - Independent Study 1 to 4 credit hours. Specialized pursuit of a subject within an area of dance not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

ENGL 205 - The Play's the Thing! - Playwriting 4 credit hours. This team-taught course combines beginning acting exercises with improvisations in writing. Texts include full-length plays and one-acts. Students are expected to write and revise one-act plays over the course of the semester. (Cross-listed as THEA 205)

MUSC 101 - Private Lessons-Piano 1 credit hours. One half-hour private lesson per week. Private lesson fee includes the use of practice rooms. Note: Some sections may require permission of instructor.

MUSC 102 - Private Lessons-Voice 1 credit hours. One half-hour private lesson per week. Private lesson fee includes the use of practice rooms. Note: Some sections may require permission of instructor.

MUSC 103 - Private Lessons-Brass 1 credit hours. One half-hour private lesson per week. Private lesson fee includes the use of practice rooms. Note: Some sections may require permission of instructor.

MUSC 104 - Private Lessons-Woodwinds 1 credit hours. One half-hour private lesson per week. Private lesson fee includes the use of practice rooms. Note: Some sections may require permission of instructor.

MUSC 105 - Private Lessons-Strings 1 credit hours. One half-hour private lesson per week. Private lesson fee includes the use of practice rooms. Note: Some sections may require permission of instructor.

MUSC 106 - Private Lessons-Percussion 1 credit hours. One half-hour private lesson per week. Private lesson fee includes the use of practice rooms. Note: Some sections may require permission of instructor.

MUSC 107 - Private Lessons-Guitar 1 credit hours. One half-hour private lesson per week. Instruction is offered in classical, acoustic, and electric guitar but all three may not be available each semester. Private lesson fee includes the use of practice rooms. Note: Some sections may require permission of instructor.

MUSC 108 - Private Lessons-Carillon 1 credit hours. One half-hour private lesson per week. Private lesson fee includes the use of practice rooms. Note: Some sections may require permission of instructor.

MUSC 110 - Music Appreciation 4 credit hours. An introductory course which introduces students to a wide variety of music, focusing on the evolution of Western European Classical music, but also touching upon American popular forms and some World Music. The course examines the historical and social background of classical music and emphasizes art of listening.

MUSC 120 - Fundamentals of Music & Tech 4 credit hours. A study of the basic rudiments of music--notation, pitch, rhythm, melody and harmony and how these elements combine to create music. The course includes music writing (elementary composition), ear training (recognition of melodic, rhythmic and harmonic patterns) and dictation (the ability to write these patterns in traditional music notation). A background in music, such as playing an instrument or vocal/choral experience, is recommended.

MUSC 130 - Beginning Class Piano I 2 credit hours. Class lessons in piano technique for the beginner. Covers basics of tone conception, rhythm, articulation, and fingering, five-finger patterns and tonic chords in major keys. Simple composition projects are a requirement of the course. No previous musical training required.

MUSC 131 - Beginning Class Piano II 2 credit hours. A continuation of MUSC 130. Beginning work in pedaling and phrasing, easier major scales and one minor scale in three forms, primary chords in major and minor in block and arpeggio from, composition, transposition and harmonization. Prerequisite: MUSC 130 or permission of instructor.

MUSC 132 - Beginning Voice Class I 2 credit hours. Group lessons in technique and the art of singing. Class presents the practical application of vocal techniques, breath support, posture, diction and projection to increase the student's ease and confidence in using the singing voice as a means of expression. Outside reading and listening is required of students.

MUSC 133 - Music of the Guzheng 2 credit hours. This course is a step-by-step guide for beginners to learn the basic skill of playing the Guzheng (Chinese Zither), a traditional Chinese instrument. Students have a chance to join the AU Guzheng Ensemble if they wish.

MUSC 200 - Special Topics 1 to 4 credit hours. Includes courses in related areas of study. If applicable, small rental fee or breakage deposit required for applied music courses such as woodwinds class, Celtic music, etc. (Sufficient demand)

MUSC 211 - World Music 4 credit hours. World Music is an exploration of Non-Western European music. It is an introduction to the study of "ethnomusicology" and the role of music in society at large and a broad-ranging view of how this role is fulfilled in a variety of cultures. The course will focus on the indigenous cultures and music of Native America, Latin America, Africa, Eastern Europe, India, Indonesia and East Asia (Japan and Korea). Student projects will explore the popular music of one or more of these areas.

MUSC 212 - American Music 4 credit hours. The course will examine the historical and social backgrounds of the incredible diversity of American Music, including native American, Classical and Popular Music through the ages, Folk, Jazz and the beginnings of Rock n' Roll.

MUSC 213 - Introduction to Jazz 2 credit hours. This course examines the origins of jazz, how it was created and the directions it has taken. We discuss the history of jazz and consider social reactions to the music and artists by listening and by reading historical writing.

MUSC 214 - Reel Music in America 4 credit hours. This course traces the history and development of film music through lecture, reading and film viewing. The class includes discussion and evaluation of different compositional styles and learning how to listen critically to film scores while viewing movies. We discuss how music and its

relationship to film have changed over the last century. In this way, we uncover how music establishes psychological moods and guides our emotions. (Every Year)

MUSC 215 - History of Rock Music 2 credit hours. In this course we study rock music from its origins to the present. We examine the place of rock music in society from its roots in African American blues and European American folk to its place in current society.

MUSC 216 - Queering the Pitch 2 credit hours. This course examines topics related to GLBTQIAAP+ musical artists, composers, and representative music. Social movements and events will also be covered to better understand the developing culture

MUSC 217 - Cultural Competencies in Music 4 credit hours. This course will examine four (4) individual cultures and identify a facts-based approach to music that is relative, including its history, sociology, and impact on society. This course is particularly useful for students in education or with interests in culture studies. No prior musical knowledge or experience required.

MUSC 220 - Music Theory II 4 credit hours. This course develops students' understandings of harmonic compositional practices of 17th through 19th century music. Students continue the study of composition and analysis and become more proficient with harmonic analysis using figured bass, bass position symbols, and Roman numerals. Prerequisite: MUSC 120.

MUSC 225 - Music History I: from Medieval to Mozart 4 credit hours. The study of the development of western music from the Medieval through the Renaissance, Baroque and early Classical periods. Changing musical styles and genres will be examined as well as the purpose of music and the musicians' role in society for each period. Readings, listening, score study and listening assignments are required.

MUSC 226 - Music History II: Romanticism to the 20th Century 4 credit hours. The study of the development of western music from the Romantic era through the 20th century. Changing musical styles and genres will be examined as well as the purpose of music and the musicians' role in society for each period. Readings, listening, score study and listening assignments are required.

MUSC 271 - University Chorus 2 credit hours. University Chorus, a large singing ensemble is open to all students. The repertoire varies from traditional to global to popular and musical theatre. A major work is performed every other semester with the AU orchestra. Previous works include Handel's "Messiah", Vivaldi's "Gloria", Mozart's "Requiem" and Orff's "Carmina Burana". Note: Ensembles may be repeated for credit to a maximum of 10 credit hours.

MUSC 272 - Chamber Singers 2 credit hours. The Alfred University Chamber Singers, a select vocal ensemble of 20-30 singers, performs a wide variety of repertoire in concerts on and off campus. Open to all students by audition. Note: Ensembles may be repeated for credit to a maximum of 10 credit hours.

MUSC 273 - Concert Band 2 credit hours. Band members study and perform music composed and arranged for the modern Concert Band, including orchestral transcriptions. Students work as an ensemble and perform at least one concert per semester. The ensemble plays a wide variety of styles including marches, symphonies, suites and more. Note: Ensembles may be repeated for credit to a maximum of 10 credit hours.

MUSC 274 - Jazz Ensemble 2 credit hours. The Jazz Ensemble provides an opportunity to explore the many styles of jazz in a big band context, including swing, be bop, Latin, and fusion. Students are also given the chance to develop their skills in improvisation. Open to all students by audition. Note: Ensembles may be repeated for credit to a maximum of 10 credit hours.

MUSC 275 - University Symphony Orchestra 2 credit hours. Open to all students, the symphony orchestra provides students an opportunity to study music ranging from the classical era to the 20th Century. The ensemble presents a concert each semester which often features student soloists. A major work is performed every other semester with the AU Chorus. Previous works include Handel's "Messiah", Vivaldi's "Gloria", Mozart's "Requiem" and Orff's "Carmina Burana". Note: Ensembles may be repeated for credit to a maximum of 10 credit hours.

MUSC 277 - Soprano/Alto Chorus 2 credit hours. The focus of this course is music written for soprano and alto voices, often composed by women. Areas of emphasis are vocal production, choral blend and basic music reading. The ensemble performs a fall concert. Note: Ensembles may be repeated for credit to a maximum of 10 credit hours.

MUSC 278 - Tenor/Bass Chorus 2 credit hours. This course offers the opportunity to explore literature for 3 and 4 part tenor/bass vocal ensembles. This course introduces the basics of singing technique Basic music reading skills are also introduced. The chorus performs one concert on campus and one concert at a location off campus. Note: Ensembles may be repeated for credit to a maximum of 10 credit hours.

MUSC 279 - Chamber Music 1 credit hours. Chamber Music refers to small ensembles (string quartets, woodwind quintets, flute duets/trios/choirs; piano trios [piano plus two other instruments] or virtually any combination of instruments and/or voices). Students will be assigned to a group and will work on classical music for their particular ensemble. Students enrolled in this class should have at least a moderate facility on their instrument and be able to read music. Note: Ensembles may be repeated for credit to a maximum of 10 credit hours.

MUSC 301 - Private Lessons-Piano, Advanced 2 credit hours. Advanced study. One-hour lesson per week. Private lesson fee. Permission of instructor required.

MUSC 302 - Private Lessons-Voice, Advanced 2 credit hours. Advanced study. One-hour lesson per week. Private lesson fee. Permission of instructor required.

MUSC 303 - Private Lessons-Brass, Advanced 2 credit hours. Advanced study. One-hour lesson per week. Private lesson fee. Permission of instructor required.

MUSC 304 - Private Lessons-Woodwinds, Advanced 2 credit hours. Advanced study. One-hour lesson per week. Private lesson fee. Permission of instructor required.

MUSC 305 - Private Lessons-Strings, Advanced 2 credit hours. Advanced study. One-hour lesson per week. Private lesson fee. Permission of instructor required.

MUSC 306 - Private Lessons-Percussion, Advanced 2 credit hours. Advanced study. One-hour lesson per week. Private lesson fee. Permission of instructor required.

MUSC 307 - Private Lessons-Guitar, Advanced 2 credit hours. Advanced study. One-hour lesson per week. Private lesson fee. Permission of instructor required.

MUSC 308 - Private Lessons-Carillon, Advanced 2 credit hours. Advanced study. One-hour lesson per week. Private lesson fee. Permission of instructor required.

MUSC 320 - Music Theory III 3 credit hours. An exploration of diatonic and chromatic materials, including harmonic sequences, secondary function, tonicization and modulation. Integrates written and analytical work with singing, aural training, keyboard and technological applications. Also includes elementary techniques in orchestration and counterpoint. Requires completion of MUSC 120 and MUSC 220.

MUSC 332 - Advanced Voice Class 2 credit hours. A continuation of MUSC 132. Continued work on vocal technique and expression with additional emphasis on singing in foreign languages (Italian and German diction). Students will learn and the use the IPA - the International Phonetic Alphabet. Prerequisite: MUSC 132 or permission of the instructor.

MUSC 450 - Independent Study 1 to 4 credit hours. Specialized pursuit of a subject within an area of music history or literature not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

MUSC 495 - Senior Recital 1 credit hours. Students enrolled in Private Lessons for at least six semesters are encouraged to present a half or full recital during their Senior year.

PDAT 120 - Technical Theatre 4 credit hours. A lecture/lab course in stage technology covering set construction, lighting, sound and scenic painting. Through a combination of lectures and hands-on practical experience, this course covers the art and design areas of set construction and provides a basic understanding of common stagecraft techniques. Lab hours required.

PDAT 200 - Special Topics in Performance Design and Technology 1 to 4 credit hours. Includes non-regularly scheduled course offerings in areas related to performance design and technology.

PDAT 220 - Design Fundamentals for Stage, Dance and Film 4 credit hours. A beginning design course introducing students to common principles of theatrical and performance design: scene, lighting, costume, sound, makeup, and props. Script analysis, research methods, the "isms"-- realism, symbolism, absurdism, postmodernism -- design unity, color, light/shadow, line/weight, and shapes, will be covered.

PDAT 221 - Making with Fabric 3 credit hours. A study in practical skills leading to the creation of wearables from design images. Students will learn basic to intermediate sewing techniques, the nature & character of a broad range of fabrics & auxiliary materials, and various potential methods and techniques used by makers in the fashion & costuming world.

PDAT 222 - Stage Makeup and Theory - A Different Way of Seeing Skin 2 credit hours. Every facet of the theatrical process requires probing, and makeup is not to be discounted. In this course, we will look at the different ways that painting a face can alter the trajectory of their character along with the ways that makeup can a transform the body into a canvas in order to tell a story. We will be delving into body and gender theory as part of this course.

PDAT 223 - Sound Design and Technology 4 credit hours. Course will cover a practical working knowledge of basic audio engineering and sound design for technical theatre production. This will include the ability to set up and operate sound equipment, use software for sound cue creation and playback, and select material and provide playback for a production.

PDAT 224 - Entertainment Lighting: Electricity and Equipment 2 credit hours. This course gives students the necessary knowledge and skills to perform the duties of a theatrical electrician. The student becomes familiar with the tools and equipment of lighting, as well as the theory of electricity and lighting systems, through instruction and hands on experience.

PDAT 225 - Woodworking Techniques for the Stage 2 credit hours. This course gives the student the necessary knowledge and skills to perform the duties of a scenic carpenter. Students become familiar with the tools, equipment, and materials of carpentry, as well as the theory of construction and scenic techniques and styles, through instruction and hands on experience.

PDAT 226 - Scenic Painting 2 credit hours. This course introduces students to the world of illusionist scene painting. Students learn the types of the scenic painting projects and various painting techniques that are needed for the execution of these projects. Student will understand the role of the scenic artist as well as learn about each and every step of the scene painting process leading from an artistic rendering to a creation of scene painting. This is a project-based course.

PDAT 231 - Prop Design and Construction 3 credit hours. A course on theatrical properties, the objects which are created, collected, or curated to help tell a story. Course will cover the role or properties designer/manager in the creation and production of props and have practical experience with many of the skills, techniques, and materials used in their creation. Students will have to purchase materials in addition to the lab fee.

PDAT 270 - Play Production 1 to 4 credit hours. A lab course designed to give students practical production experience under faculty supervision in the areas of technical theatre and design. May be repeated for credit to maximum of 4 hours. Prerequisite: Permission of instructor.

PDAT 300 - Topics in Performance Des/Tech 1 to 4 credit hours. Includes non-regularly scheduled course offerings in areas related to performance design and technology.

PDAT 315 - Advanced Design Seminar: Design is Dramaturgy 2 credit hours. This course examines design for live performance by dismantling definitions of the designer’s role. Beginning with source materials not intended for performance, students analyze narrative and structure to create performance environments. Emphasis is on the designer as adaptor/translator/storyteller.

PDAT 320 - Scene Design 3 credit hours. A scenic design course, which builds on the principles of design taught in PDAT 220. It further develops skills in research methodology, script analysis, sketching and painting techniques, model building, graphics, and use of computer-aided design. Representative scripts will be studied. Prerequisite: PDAT 220 or permission of instructor.

PDAT 321 - Lighting Design 3 credit hours. A study of basic electricity and theatrical lighting equipment with an emphasis on both the artistic as well as the technical aspects of stage lighting Crew assignments required. Prerequisite: PDAT 220 or permission of instructor.

PDAT 322 - Stage Costume Design 3 credit hours. A costume focused design course which builds on the principles of design taught in PDAT 220. It further develops skills in research methodology, script analysis, costume design theories, artistic processes, and

costume construction for specific plays. Lab hours required. Prerequisite: PDAT 220 or permission of instructor.

PDAT 330 - Costuming on the Half Scale 4 credit hours. Creating the patterns and shapes through which a designer's rendering is transformed into a 3-dimensional garment, "Half Scale" teaches skills of Flat Patternmaking and Draping. These invaluable skills enable the creation of original works- as clothing, costume or sculptural work.

PDAT 350 - Independent Study 2 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Junior standing and an approved Plan of Study required.

PDAT 370 - Advanced Play Production 1 to 4 credit hours. Advanced level continuation of PDAT 270. May be repeated for credit up to a maximum of 6 credit hours.

PDAT 385 - Internship in Performance Design and Technology 2 to 4 credit hours. An independent project allowing students to gain experience in professional or semi-professional performance design/technical theatre settings. A written Plan of Study describing the requirements of the course is required. Prerequisite: Junior standing; approval of Division Chair.

PDAT 470 - Advanced Projects in Theatrical Design and Technology 1 to 4 credit hours. This projects course is a faculty supervised experience for the advanced student in one of several areas of design: scenic; lighting; costume; sound; props; makeup; and technical direction. Prerequisite: PDAT 120 and 220; One of the following: PDAT 222, 320, 321, 322, 323; or permission of instructor.

PDAT 495 - Senior Project 2 to 4 credit hours. Students complete a project for the Performance Design and Technical Theatre minor in their areas of interest. The project is to be submitted as a proposal to the faculty and approved in advance, with advisory support and supervision provided by the appropriate faculty member. Prerequisite: senior standing; approved written proposal; permission of instructor.

SJST 216 - Queering the Pitch 2 credit hours. This course examines topics related to GLBTQIAAP+ musical artists, composers, and representative music. Social movements and events will also be covered to better understand the developing culture

THEA 110 - Introduction to Theatre 4 credit hours. A study of theatre as a creative process and cultural phenomenon, including text and performance analysis, the examination of dramatic literature, and opportunities to experience and explore the work of the actor, the playwright, the director, the designer, and the producer. Scripts and productions which are the sources for discussions and assignments are drawn from a full range of cultures and time periods.

THEA 145 - Improvisation: Just Say Yes! 2 credit hours. This rigorous course provides new and returning theatre students with a fun, collaborative environment for exploring a variety of improvisation techniques drawn from a range of styles and teachers.

THEA 200 - Special Topics 1 to 4 credit hours. Includes non-regularly scheduled course offerings in related areas of study. Examples include Musical Theatre, Theatre and Social Change, Ritual and Theatre, Performance Theory, Ethnic Theatre.

THEA 205 - Playmaking: From Writing to Devising For the New Era 4 credit hours. In this course, students will learn various approaches to dramatic storytelling ranging

from narrative play writing, devising, and improvisational techniques to create story. We will explore what it means to dramatically tell a story and the different approaches taken in the 21st century to adapt to a constantly changing art form. We will explore development of character, plot, and action. Using various techniques and approaches to dramatic writing, students will have created a 10-min play or 10-performance upon the completion of this course. (Cross-listed as ENGL 205)

THEA 211 - Women in Theatre, Society and Politics 3 credit hours. A survey course tracing the role(s) of women in theatre - audience, acting, directing, writing, designing, managing - from the ancient Greeks to contemporary times in a range of cultures. Representative plays, essays, and production artifacts are studied to discover the changing roles of women. (Cross-listed as WGST 211)

THEA 212 - From Page to Stage: Script Analysis 4 credit hours. Play-scripts are the primary source materials for theatrical performances. Focusing on analysis of play texts as well as examining structure, genre, theme, style, character, language and imagery, this course encourages creative investigation and research for theatre practitioners and scholars.

THEA 230 - Stage Management Fundamentals 2 credit hours. This course demonstrates the stage manager's role in theatrical productions and how essential it is for success. Topics include pre-production research, rehearsal protocol, production guidelines, stagecraft terminology, and developing a shared language with designers, directors, producers, cast, and crew.

THEA 240 - Acting I 4 credit hours. A beginning level course open to all students. We dive into physical theatre and improvisation, also learning Stanislavsky-based approaches, to create fantastical performance while building skills in story-telling, vocal, kinesthetic and imaginative expression.

THEA 242 - Collaborative Performance Lab 4 credit hours. This course, culminating in a public performance, will provide students with specialized focus on devised, ensemble theatre-making in an experimental workshop setting.

THEA 245 - Improvisation: Just Say Yes! 2 credit hours. This rigorous course provides new and returning theatre students with a fun, collaborative environment for exploring a variety of improvisation techniques drawn from a range of styles and teachers.

THEA 270 - Play Production 1 to 4 credit hours. A lab course designed to give students practical production experience under faculty supervision in the areas of acting or directing. May be repeated for credit to maximum of 4 hours. Prerequisite: Permission of instructor.

THEA 300 - Special Topics 1 to 4 credit hours. Includes non-regularly scheduled course offerings in related areas of study. Examples include Musical Theatre, Theatre and Social Change, Ritual and Theatre, Performance Theory, Ethnic Theatre.

THEA 311 - Theatre: History, Art, Politics and Society I 4 credit hours. An examination of theatre's place in many world cultures, primarily focusing on the development of Western Drama, from earliest times through 1650. Emphasis on performance content and style, theatre architecture, and management practices as a reflection of a given culture's social, religious and political structures, and aesthetic impulses. Prerequisite: THEA 110 or permission of instructor.

THEA 312 - Theatre History: Art, Politics and Society II 4 credit hours. An examination of Theatre's place in many world cultures, with a focus on the development of Western Drama, from 1650 to the present. This broad survey course examines different aesthetic and historical movements in theatre, along with different cultural contexts, content and performance styles.

THEA 330 - Directing I 4 credit hours. Through workshops, discussion and individual research projects, students develop skills ranging from casting and organizing a production; to rehearsal methods and building an ensemble; to understanding key aspects of design theory and textual scene analysis. Students will have plenty of opportunities to workshop scenes and ideas, learn the skills of constructively critical feedback, and rehearse and present a final project of their choice.

THEA 340 - Acting II 3 credit hours. This intermediate level course emphasizes text analysis, scene study, in-depth character development, character relationship explorations, and exploration of the interface between text and subtext with a direct application to performance. Prerequisite: THEA 240 or permission of instructor.

THEA 342 - Advanced Performance Lab 4 credit hours. Advanced level continuation of THEA 242. May be repeated one time for credit (8 hours maximum).

THEA 350 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Junior standing and an approved Plan of Study required.

THEA 370 - Advanced Play Production 1 to 4 credit hours. Advanced level continuation of THEA 270. May be repeated for credit up to a maximum of 6 credit hours.

THEA 385 - Internship in Theatre 2 to 4 credit hours. An independent project allowing students to gain experience in professional or semi-professional theatre settings. A written Plan of Study describing the requirements of the course is required. Prerequisite: Junior standing; approval of Division Chair.

THEA 400 - Special Topics 1 to 4 credit hours. Includes non-regularly scheduled course offerings in related areas of study. Examples include Musical Theatre, Theatre and Social Change, Ritual and Theatre, Performance Theory, Ethnic Theatre.

THEA 431 - Directing II 3 credit hours. The continued exploration of the processes and practices of production direction from conceptualizing, to auditions, to staging, resulting in the public presentation of a one-act play. Topics include special rehearsal problems, actor coaching, rehearsal pacing, and blocking. Prerequisite: THEA 430 or permission of instructor.

THEA 440 - Acting III 3 credit hours. Intended for the serious student of acting, this advanced performance course applies the in-depth skills developed in Acting II to historical texts: the Greek classics, Shakespeare, Restoration Comedy, Commedia dell'arte, modern realism. Prerequisite: THEA 240 and 340.

THEA 490 - Senior Seminar 1 credit hours. This course provides tools to bridge the gap between academic theatre and what comes next. Topics include exploration of options, the "business" of theatre, marketing oneself, resume building, taxes for independent "contractors", and preparation of materials (auditions, portfolios). Prerequisite: Theatre major; senior standing.

THEA 495 - Senior Project 2 to 4 credit hours. Students complete a project for the Theatre major in their areas of interest. The project is to be submitted as a proposal to

the faculty and approved in advance, with advisory support and supervision provided by the appropriate faculty member. Prerequisite: senior standing; approved written proposal; permission of instructor.

WGST 211 - Women in Theatre, Society and Politics 3 credit hours. A survey course tracing the role(s) of women in theatre - audience, acting, directing, writing, designing, managing - from the ancient Greeks to contemporary times in a range of cultures. Representative plays, essays, and production artifacts are studied to discover the changing roles of women. (Cross-listed as THEA 211)

WGST 217 - Queering the Pitch 2 credit hours. This course examines topics related to GLBTQIAAP+ musical artists, composers, and representative music. Social movements and events will also be covered to better understand the developing culture

Kazuo Inamori School of Engineering Courses

Biology

Ceram/Glass/Matls/Biomatls Egr

CEMS 200 - Special Topics 2 to 4 credit hours.

CEMS 203 - Introduction to Ceramic Powder Processing 3 credit hours. An introduction to ceramic powder processing that couples lectures with laboratory experiments. The course the practical aspects of ceramic processing: powder characterization, colloidal stability and suspension rheology, ceramic fabrication and microstructure evolution (sintering and densification). Prerequisite: CHEM 106.

CEMS 214 - Structure and Properties of Materials 3 credit hours. This course introduces the student to the relationships between the various levels of structure (electronic, atomic, crystal, microstructure and macrostructure) in a material and the influence of structure on properties and performance. The influence of structure on mechanical, electrical, optical, thermal and magnetic properties are discussed in the context of bonding, defects, crystal, micro and macrostructure. A significant aspect is the emphasis on the raw materials from which fuels, engineering polymers, ceramics and metals are derived. Prerequisite: CHEM 106, MATH 152.

CEMS 215 - Microscopy and Microstructural Characterization 3 credit hours. This course introduces optical, electron, and scanning probe microscopy techniques used to characterize the microstructure of materials. Lectures focus on the fundamental physical/chemical phenomena associated with the various techniques, their practical application, and the interpretation of the resultant data. Capabilities and limitations of these techniques are discussed. Laboratory exercises consist of the preparation and hands-on characterization of a variety of materials via both optical and electron microscope techniques. Prerequisite: CEMS 214 and PHYS 126; Pre- or Co-requisite: CEMS 216.

CEMS 216 - Bonding and Structure of Materials 3 credit hours. An introduction to the basic principles of solid materials structure. Electronic, atomic, and crystal structure are the primary focus for discussion. Structure is the foundation for understanding the physical and chemical properties of materials and for discussing defects in crystals. Key concepts are bonding within solids, rules that govern packing of atoms to form crystals, crystal structure, techniques for describing material's crystallography and selected properties of crystalline materials. Discussions culminate in an overview of common crystal structures in metals and ceramics. Prerequisite: CHEM 106 and CEMS 214.

CEMS 235 - Thermodynamics of Materials 4 credit hours. This course introduces the fundamental concepts of thermodynamics, equilibrium, and thermochemistry relevant to materials systems. Prerequisite: CHEM 106, MATH 253, CEMS 214.

CEMS 237 - Thermal Processes in Materials 4 credit hours. This course studies the basic principles of high-temperature reactions and processes. The course is divided into several subunits: ternary phase diagrams, surface and interface phenomena, atomic defects in materials, diffusion, and sintering theory. Students will get a solid foundation

in each of these areas as well as seeing the interrelation and importance of those principles with respect to a control of the microstructure and properties of materials. Prerequisite: CEMS 235 or CHEM 343.

CEMS 251 - Mechanics of Materials 3 credit hours. This course is an introduction to the nature of forces acting on solid deformable bodies and the stresses and strains generated by those forces. It includes analysis of reactions of rigid bodies to simple loads from first principles and through finite element software. We apply these principles to mechanical testing of materials and engineering design. Prerequisite: ENGR 102 and PHYS 125.

CEMS 300 - Special Topics 1 to 4 credit hours. This course covers topics which are not ordinarily covered in detail in the general curriculum, but are either current areas of faculty research or areas of current or future industrial interest.

CEMS 303 - Powder Characterization 1 credit hours. This is a laboratory course investigating powder characterization tools for materials research. There is specific exposure to particle size, surface area, density, rules of mixtures, etc. One lecture and one lab per week. (Offered: Fall in A-Block)

CEMS 313 - Thermal Analysis 1 credit hours. This is a laboratory course investigating thermal analysis tools for materials research. There is specific exposure to TGA, DTA/DSC, Dilatometry, thermal conductivity, thermocouple calibration, etc.(Offered: Fall in B-Block)

CEMS 314 - Ceramic Processing Principles 3 credit hours. Ceramic processing and fabrication is discussed in terms of scientific principles and engineering unit operations. Topics include the beneficiation and characterization of raw materials, colloidal behavior and rheology, additives, particle packing, mixing, forming processes, drying, and sintering. Prerequisite: CHEM 106.

CEMS 316 - Chemical Processing in Ceramics 3 credit hours. This course provides the knowledge and working understanding of the chemical facts and principles involved in the synthesis of raw materials and the chemical fabrication techniques used in current industrial practice. The discussion focuses attention on both oxide and non-oxide ceramics involved in high-performance structural and electronic applications. The design of chemical processes is emphasized in assignments. Prerequisite: CHEM 106.

CEMS 317 - Sintering 3 credit hours. This course covers solid-state, liquid-phase, viscous-phase, and reactive sintering in terms of mechanisms, grain growth, impurity segregation and grain boundaries, microstructural evolution, and microstructure related properties. Oxide and non-oxide materials and experimental methods are also discussed. Prerequisite: CEMS 237 and 314 or permission of instructor.

CEMS 318 - Refractories 3 credit hours. This course provides technical information concerning the raw materials, processing, microstructure, properties and applications of the principal types of refractories and high-temperature insulations. Technological and engineering factors pertinent to manufacture, process design and control and design of refractory and insulation systems are presented. An understanding of current practice is used as a basis for recognizing refractory needs for design and applications, and areas for research and development of materials for future applications.

CEMS 322 - Introduction to Glass Science 3 credit hours. A survey of the nature of the vitreous state with detailed consideration of structural and kinetic theories of glass formation. Composition-structure-property relationships are emphasized to illustrate how glass compositions can be designed to fulfill a particular set of product

requirements. Processes for "post-forming" treatments which further tailor properties are also presented. Prerequisite: CEMS 235.

CEMS 325 - Glass Laboratory 2 credit hours. This laboratory prepares students to fabricate and measure the properties of glass correlating composition and property relations, and observing trends. Optical property analysis is emphasized as are novel fabrication techniques such as sol-gel glass design for high-tech applications such as biomedical and photonics. Pre- or co-requisite CEMS 322.

CEMS 328 - Industrial Glass and Coatings on Glass 3 credit hours. The material covered in this lecture-based course include (1) glass markets, applications, and processing, (2) coatings on glass: processing, properties, and functionality, and (3) current topics in the glass industry. Prerequisite: CEMS 322.

CEMS 334 - Introduction to Polymers 3 credit hours. An introduction to the polymeric materials for engineering and industrial use that studies the fundamental classes, processing, properties, and uses of polymeric materials. In addition to the major polymers, specialty polymers for biological, electrical, and high-performance uses are discussed. Necessary organic nomenclature is covered. Prerequisite: CEMS 235 or CHEM 343.

CEMS 336 - Physical Metallurgy I 3 credit hours. Introduction to the physical and mechanical properties of metals with an emphasis on relating structure to properties. Strength, toughness, ductility, dislocations, phase diagrams, alloying, phase transformations, strengthening mechanisms, heat treatment, and solidification in metal systems. Processing and properties of plain carbon steels. Overview of forming and joining methods. Prerequisite: CEMS 214/235/251 or MECH 241/320.

CEMS 342 - Thermal and Mechanical Properties 4 credit hours. This course is an in introduction to the thermal and mechanical behavior of materials, including ceramics, glasses, metals, and polymers. Properties considered include strength, elastic modulus, hardness, toughness, thermal stresses, heat capacity and enthalpy, thermal conductivity, and thermal expansion. Heat transfer is also covered. Discussion includes the effects on thermal and mechanical properties structure (atomic scale and microstructure), processing, and temperature. Prerequisite: CEMS 214, 235 and 237.

CEMS 344 - Properties II: Electrical, Magnetic, and Optical 4 credit hours. Underlying the macroscopic electrical (electronic) properties of materials is the behavior of the atomic state. In this course, a summary of basic concepts covering the electrical, magnetic, and optical behavior of solids is presented. Emphasis is placed on the fundamental properties of electrons and ions in solids. The relationship of these fundamental properties to ceramics is discussed using microstructure, property relations. The use of materials (ceramics) in electrical, magnetic, and optical devices is discussed through solutions to numerical problems. Prerequisite: PHYS 126, MATH 271, CEMS 237.

CEMS 347 - Spectroscopy 2 credit hours. This course introduces spectroscopic techniques used to characterize the atomic structure of materials. Lectures focus on the fundamental physical/chemical phenomena associated with the various techniques, their practical application, and the interpretation of the resultant spectra. Capabilities and limitations of the various techniques are discussed. Laboratory exercises consist of hands-on characterization of the bulk and surface structure of various materials via the spectroscopic techniques discussed in lecture. Prerequisite: CEMS 216.

CEMS 349 - X-ray Characterization 2 credit hours. This course, which includes a laboratory, introduces x-ray techniques used to characterize materials. Prerequisite: CEMS 216 and junior standing.

CEMS 352 - Electroceramics 3 credit hours. A survey of ceramics that are used for their electrical, magnetic, optical and piezoelectric functions including discussion of their design, composition, critical properties, processing techniques and applications. Categories include insulators, ceramic superconductors, capacitors, resistors, gas sensors, thermistors, varistors, piezoelectric, magnetic and electro-optic ceramics. Prerequisite: PHYS 126, CEMS 214.

CEMS 368 - Introduction to Bioengineering 3 credit hours. Bioengineering combines advances in engineering, biology and medicine to improve human health. It is, by necessity, cross-disciplinary. This course surveys and integrates selected aspects of engineering, biomedical, and clinical sciences to provide students with a global perspective of the field. Offered Fall semesters only. Prerequisite: CEMS 214 and BIOL 211 or permission of the instructor.

CEMS 397 - Glassartengine 2 credit hours. This is an interdisciplinary course between glass engineering students and glass art students. The course is taught by various faculty across both areas combining both technologies and philosophies to foster collaborations yielding unknown results. (Studio elective for art students; Technical Elective for engineering students.) May be repeated for credit up to a total of 8 credit hours. (Cross-listed as ART 397)

CEMS 400 - Special Topics 1 to 4 credit hours. This course covers topics which are not ordinarily covered in detail in the general curriculum, but are either current areas of faculty research or areas of current or future industrial interest.

CEMS 411 - Science of Whitewares 3 credit hours. The science and technology of whitewares (i.e., primarily stonewares and porcelains) covering mineralogy, raw material characterization, mixing, rheology and plasticity, forming processes, drying, firing, phase equilibria, thermal stress evolution, microstructural characterization, physical properties, and glazing. This course provides students with a fundamental basis for analyzing problems encountered in whitewares production so that general knowledge can be used to solve specific problems. Prerequisite: CEMS 203, 314.

CEMS 415 - Porcelain Enamels 3 credit hours. Porcelain enamels are chemically durable ceramic coatings on metals designed to resist corrosion, extend vessel lifetimes, and provide a sanitary, smooth, and non-reactive surface. This course introduces the formulation, characterization, and problems associated with the use of porcelain enamels. Prerequisite: CEMS 322.

CEMS 420 - Optics and Photonics 3 credit hours. The focus of this course is the foundations of linear optics leading to detailed exploration of electronic and vibrational processes in different materials and photonics. Advanced topics include femtosecond laser pulses and THz spectroscopy. Format consists of lectures and hands-on laboratory for research/measurements. Prerequisite: CEMS 344, PHYS 325.

CEMS 423 - Mass Transport in Glasses and Melts 3 credit hours. A thorough discussion of the fundamentals of diffusion processes, which will be followed by discussion of ionic diffusion and ion exchange, gas diffusion, viscosity, ionic conductivity and dielectric relaxation, mechanical relaxation, chemical durability, and weathering in glasses, glass-ceramics, and melts. The effects of both atomistic structure and

morphology will be discussed for each of these topics. Prerequisite: CEMS 235, 237 and 322.

CEMS 426 - Advanced Glass Science 3 credit hours. This course covers advanced topics in glass and related fields which are not ordinarily covered in the general curriculum, but are either current areas of faculty research interest or areas of current or anticipated industrial or academic interest. Examples of possible topics include, but are not limited to, rare elements in glasses, non-silicate oxide glasses, halides in glasses, chalcogenide glasses, sol-gel processing, specialized experimental methods, such as neutron and or x-ray diffraction spectra, characterization of glasses, biological applications of glass, glass-ceramics, computer modeling of glass structure, natural glasses, and other topics which correspond to interests of the students and faculty. This course may occasionally be taught by visiting faculty in areas of their specialization. Readings from the literature will normally be a significant component of this course. Prerequisite: CEMS 322.

CEMS 438 - Nanotechnology 3 credit hours. The science and engineering of creating materials, functional structures and devices on the nanometer scale. Carbon nanotubes, nanocrystals, quantum dots, nanoscale films and composites, properties of materials as a function of size, self-assembly. Molecular engineering, bionanotechnology, devices and applications. Prerequisite: CEMS 214.

CEMS 446 - Mechanics of Composites 3 credit hours. An introduction to the mechanical properties of composites. Topics include matrices and reinforcements, fabrication techniques, review of elasticity, micromechanics, classical lamination theory, and design criteria. Prerequisite: CEMS 214 and (CEMS 251 or MECH 241).

CEMS 450 - Independent Study 1 to 3 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Senior standing and approved Plan of Study required.

CEMS 465 - Biocompatibility 4 credit hours. This course focuses on the application of materials to restoring human anatomy which has been compromised due to disease or trauma. This lecture series looks at how synthetic and natural materials restore body function and how they interact with host tissues, including materials science, surface interactions, and medical procedures. Prerequisite: CEMS 368.

CEMS 466 - Skeletal Tissue 3 credit hours. The skeleton contains 206 bones that provide strength and rigidity yet allow flexibility. However, bone can fail as a result of both disease and insult. In this course we study the hierarchical structure of bone, how disease affects it and, subsequently, its repair both medically and surgically. Offered every year. Prerequisite: CEMS 368.

CEMS 468 - Biomedical Materials 3 credit hours. A survey of ceramic, metal and polymer materials and devices for repair and replacement parts in the human body. Emphasis is on the nature of the materials, the design and fabrication of devices, properties, applications and the problems of introducing foreign materials into the biosystem. Prerequisite: CEMS 214 and 251.

CEMS 480 - Thesis 2 credit hours. An independent research project carried out under the supervision of a faculty member. Taken twice for a total of 4.00 semester credit hours of thesis. Senior standing required.

ENGR 408 - Statistics for Manufacturing 3 credit hours. An introduction to the application of statistical principles and concepts to manufacturing. Emphasis is on real-world issues and sample sizes with use of Six Sigma and Lean Manufacturing

concepts implemented on a real-world basis. Course concludes with Six Sigma Yellow Belt Certification Exam. Prerequisite: senor standing and one of the ENGR 305/202 or BUSI 113 or Math 381.

ENGR 480 - Senior Capstone Individual Project 2 credit hours. This capstone project is conducted by an individual student, typically over two consecutive semesters. Successful projects involve project planning and management; decision-making under realistic constraints; problem solving; data collection, analysis, and evaluation; and communication of results in a poster presentation and written report. Repeatable for credit up to 4 credit hours. Prerequisite: senior standing.

ENGR 486 - Engineering Operations 4 credit hours. This course helps students understand the engineering and business aspects of a manufacturing facility with an overview of large scale manufacturing process. Major topics covered are: quality control, plant layouts and the use of charts, the economics of manufacturing including cost estimation, cost accounting, depreciation, cash flow, tax consequences and rate of return analysis. Significant emphasis is placed on the final report encompassing set-up of business plans for a hypothetical product. A visit to at least one manufacturing plant is required. Pre-requisite: senior standing.

RNEW 310 - Fuel Cell Principles and Technology 3 credit hours. This course is designed for advanced undergraduate students to gain the basic science and engineering concepts behind fuel cell technology. It emphasizes the functional scientific principles and practical application. Prerequisite: junior standing.

Dean's Office SOE

ENGR 110 - Technical Communications 4 credit hours. Technical communication is the delivery of information in an organized manner. This course will examine tools, resources, and design methods used to create technical documents. The course is designed for students who have solid grammar, spelling, and punctuation skills. Prerequisite: ENGL 101 or equivalent.

ENGR 160 - First-Year Seminar 0 credit hours. A series of lectures each semester for first year engineering students on topics of importance to engineers. Attendance mandatory.

ENGR 360 - Undergraduate Seminar 0 credit hours. A series of lectures each semester for sophomore, junior, and senior engineering students on topics of importance to engineers. Attendance mandatory.

ENGR 370 - Engineering Leadership Project 1 credit hours. This is an optional course for students in the E-LEAD (Engineering Leadership Education and Development) program. Students gain practical experience to apply leadership skills in the design and deployment of a project. Prerequisite: Permission of instructor. (Can be taken twice for credit)

Electrical Engineering

ELEC 223 - Electrical Engineering Laboratory for Non-EE 2 credit hours. Circuit elements; voltage and current laws; mesh and node equations; voltage and current sources; energy and power; series and parallel circuits; equivalent circuits; sinusoidal sources and circuit responses; principles of circuit analysis; measurements of voltage,

current, resistance, capacitance and inductance. Prerequisite PHYS 126 and MATH 152.

ELEC 325 - Data Acquisition 2 credit hours. Data acquisition principles; basic measurements; data interface and acquisition; analog and digital signals; programming and interfaces for instrument and system control; data formatting; data analysis and visualization techniques (LabVIEW). Prerequisite PHYS 126; ENGR 220 or ELEC 223; MATH 271.

General Education

ENGR 101 - Introduction to Engineering 2 credit hours. An introduction to engineering with consideration of real engineering problems, such as those identified as Engineering Grand Challenges by the National Academy of Engineering. This course is taught in a project-based learning environment.

ENGR 102 - Computer Aided Design 2 credit hours. An introduction to 3D conceptualization, computer aided solid modeling and design, engineering drawings, and simulation using SolidWorks. The class is conducted in a "learning-laboratory" style in which students exercise a self-paced individual learning experience through the completion of class projects and weekly quizzes.

ENGR 104 - Computer Aided Engineering 2 credit hours. An introduction to mathematical calculations and computer programming techniques for science and engineering. Assignments include tutorial exercises and group project assignments focusing on engineering design and analysis of systems, devices, and materials. MatLab is the primary tool used.

ENGR 117 - Engineering Foundations II 2 credit hours. Engineering Foundations 2 uses an integrated experiential approach. This project-based course introduces students to the engineering fields offered at Alfred University. Students learn hands-on how to design, communicate, and record their experiences effectively. This course is supported by assignments in ENGR 106 Engineering Communications Laboratory and by ENGR 101 Engineering Foundations I. Pre- or co-requisite ENGL 101 or equivalent. Credit permitted for only one of ENGR 117 or ENGR 111-116.

ENGR 200 - Special Topics 2 to 4 credit hours.

ENGR 206 - Engineering Economy 3 credit hours. The analysis and evaluation of alternative uses of capital in engineering and business projects. Financial decision-making for engineering and management alternatives involving investment, operating cost and time value of money. Prerequisite: MATH 152.

ENGR 210 - Discovery and Disaster 2 credit hours. Throughout history, technological discoveries have enabled humanity to do new things in new ways. In some cases, these "discoveries" have been driven by "disaster" or led to "disaster". In this course, we examine a number of such discoveries. We place the events in cultural, technical, historical, environmental, and ethical context. Counts toward the Humanities/Social Sciences requirement. Prerequisite: Sophomore standing.

ENGR 300 - Special Topics in Engineering 1 to 4 credit hours.

ENGR 301 - Engineering Leadership: Principles and Practice for E-LEAD 1 credit hours. As a required course for students in the E-LEAD (Engineering Leadership Education and Development) program, this course explores the nature, theory, and practice of leadership. Permission of the instructor is required for registration.

ENGR 305 - Engineering Statistics 3 credit hours. Statistics as a tool in scientific and engineering applications. Topics include design of experiments, hypothesis testing, analysis of variance, regression analysis, statistical quality control, Bayesian decision-making and industrial applications and design. Prerequisite: MATH 152.

ENGR 306 - Engineering Economics 2 credit hours. This course enables students to understand economic aspects of an engineering project. They learn some engineering economic tools including analysis of financial statement, understanding of the concept of the "time value of money," proficiency in calculating equivalent cash flows, and capability of evaluating investment projects. Prerequisite: MATH 152.

ENGR 395 - Engineering Design 2 credit hours. This course introduces the junior-level student to engineering design as a part of the capstone experience. Students learn basic design principles and study some selected examples. Small teams of students complete a design project. Prerequisite: Junior standing or permission of the instructor.

ENGR 400 - Special Topics in Engineering 2 to 4 credit hours. Special topics in engineering are offered. Topics vary from year to year.

ENGR 450 - Independent Study 1 to 3 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Junior or senior standing and approved Plan of Study required.

Mech/Elec/Renewble Energy Engr

ENGR 220 - Circuit Theory I 4 credit hours. Voltage and current laws, voltage and current sources, resistor, capacitor, and inductor. Series and parallel circuits, equivalent circuits, mesh and node equations, sinusoidal response, electric power and energy. Prerequisite: PHYS 126; pre- or co-requisite: MATH 271.

ENGR 471 - Genetic Algorithms 3 credit hours. Genetic Algorithms, GA, is a collection of search and optimization techniques that function according to the evolutionary processes. Simple GA, classifier systems, GA with variable population size, and GA in machine learning context are introduced. Also, selected applications in optimization techniques and prediction methods are discussed. This is a project-oriented course. Students should have knowledge of C++, MATLAB, or a similar programming language.

ENGR 484 - Optimization Methods in Engineering 3 credit hours. In this course we study optimization as an engineering design tool. Topics covered include nonlinear programming, computational techniques for unconstrained and constrained problems, conjugate gradient, feasible directions methods, and design applications. Prerequisite: ENGR 104 and MATH 271.

ENGR 490 - Senior Capstone Group Project 2 credit hours. This capstone project is conducted by a group of students, typically over two consecutive semesters. Successful projects involve project planning and management; decision-making under realistic constraints; problem solving; data collection, analysis, and evaluation; and communication of results in a poster presentation and written report. Repeatable for credit up to 4 credit hours. Prerequisite: senior standing.

MECH 211 - Statics 3 credit hours. Two and three-dimensional force systems, the concept of equilibrium, analysis of trusses and frames, centroids, bending moment and shear diagrams, friction. Prerequisite: PHYS 125, MATH 152.

MECH 212 - Dynamics 3 credit hours. Rectilinear and curvilinear motion, translation and rotation, momentum and impulse principles, and work-energy relationships. Prerequisite: PHYS 125, MATH 253.

MECH 241 - Mechanics of Materials 3 credit hours. The mechanics of solid deformable bodies, members subjected to tension, compression, flexure and torsion. Beam topics, stability of columns, combined stresses and strains. Prerequisite: MECH 211.

MECH 320 - Thermodynamics I 3 credit hours. Thermodynamic properties of gases, vapors and liquids. Laws of thermodynamics, energy and availability analysis. Prerequisite: MATH 253, PHYS 125.

MECH 321 - Thermodynamics II 3 credit hours. Applications of thermodynamic principles to the analysis of energy systems including power and refrigeration cycles. Mixtures and solutions, chemical reactions and equilibrium. Prerequisite: MECH 320.

MECH 324 - Fluid Mechanics I 3 credit hours. Principles of mechanics and thermodynamics applied to fluids at rest or in motion. Compressible and incompressible flow, viscous and non-viscous flows, boundary layers, pipe flow, dimensional analysis. Prerequisite: MECH 212, MATH 253.

MECH 326 - Heat Transfer 3 credit hours. Principles of steady-state and transient conduction, radiation and convection. Applications to heat exchangers and environmental problems. Prerequisite: MECH 320, 324.

MECH 327 - Thermal Sciences Laboratory 2 credit hours. Experiments are conducted to illustrate aspects of fluid mechanics, thermodynamics, and heat transfer. Prerequisite: junior standing, MECH 324, 326.

MECH 343 - Mechanics of Materials Laboratory 2 credit hours. Experiments designed to illustrate the principles of mechanics of materials and the methods of experimental mechanics. Prerequisite: MECH 211, MECH 241, MATH 271.

MECH 354 - Mechatronics 3 credit hours. Mechatronics is an integration of mechanical, electrical, electronic, and control engineering. Topics include sensors, signal processing, mechanical and electrical actuation systems, system models, frequency response, closed-loop controllers, and PLC’s. Prerequisite: ENGR 220.

MECH 362 - Kinematics and Dynamics of Machinery 3 credit hours. Analysis and synthesis of mechanisms. Applications to reciprocating engines, cams, gears, flywheels, balancing, critical speeds, torsional vibration. Prerequisite: MECH 212.

MECH 364 - Machine Design I 3 credit hours. Analysis, synthesis and design of machine elements and systems. Development of engineering judgment, stress and failure analysis, design for finite and infinite life. Corrosion, wear, lubrication, springs, and bolts. Prerequisite: (MECH 241 or CEMS 251), MECH 362.

MECH 366 - Manufacturing 3 credit hours. Analysis of manufacturing processes. Topics include casting, forging, extrusion, drawing, sheet-metal working, machining, powder metallurgy, fabrication of non-metals, joining, and many others. Plant tours are a required part of the course. Prerequisite: junior standing, MECH 212, and CEMS 214 or ENGR 204. Pre- or Co-requisite: ENGR 202 or ENGR 305.

MECH 400 - Topics in Mechanical Engineering 2 to 4 credit hours. Special topics in mechanical engineering which vary from year to year. Prerequisite: Permission of instructor. (Sufficient demand)

MECH 415 - Mechanical Vibrations I 3 credit hours. Harmonic oscillator; response of damped linear systems; multi-degree of freedom systems; introduction to vibrations of continuous systems. Prerequisite: MATH 271.

MECH 417 - Introduction to Finite Element Analysis 3 credit hours. Use of the finite element method to solve problems in the areas of stress analysis, heat conduction. and fluid flow. Weighted residual and variational approaches, shape functions, numerical integration, and the patch test. Prerequisite: (CEMS 251 or MECH 241), MATH 271.

MECH 422 - Control Systems 3 credit hours. Linear feedback control system modeling analysis, and compensation techniques. Prerequisite: RNEW 322.

MECH 424 - Fluid Mechanics II 3 credit hours. Advanced topics in fluid mechanics: compressible flows, boundary layers, potential flow, turbomachinery. Prerequisite: MECH 320, 324, MATH 271.

MECH 434 - Heating, Ventilation, and Air Conditioning 3 credit hours. Applied engineering thermodynamics; psychometrics; humidification and dehumidification processes; air cooling processes, heating processes; heat vapor transmission, fluid flow and pressure losses; air conveying and distribution. Prerequisite: MECH 321, (MECH 326 or CEMS 332).

MECH 435 - Industrial Control via Microcontroller 3 credit hours. This course covers industrial control process and principles, fundamentals of microcontroller systems, hardware, software, embedded processors, logic, circuits, debugging, development tools, architecture, designs, and controls.

MECH 438 - Alternative Vehicle Energy Control and Powertrain Design 3 credit hours. In this course we explore the design fundamentals of alternative energy vehicles including electric and hybrid vehicles. Topics covered include power electronics, power systems, drivetrain, component modeling, battery systems, supervisory control and fault diagnosis. We rely heavily on model-based design including Simulink, with an emphasis on electric and hybrid vehicles. Prerequisite: ENGR 104 and ENGR 220.

MECH 448 - Mechanics of Composite Materials 3 credit hours. An introduction to composite materials with an emphasis on their selection, analysis, and use in modern engineering applications. Advantages and limitations of composite materials, basic concepts and characteristics. Stiffness and strength theories for uniaxial and multidirectional composite materials, with a macromechanical emphasis. Prerequisite: MECH 241, MECH 244 or CEMS 214, MATH 271.

MECH 464 - Machine Design II 3 credit hours. Analysis, synthesis and design of machine elements and systems. Design of specific machine elements will be covered, including shafts, fasteners, springs, bearings, gears, clutches, brakes and flexible mechanical elements. Prerequisite: senior standing and MECH 364.

MECH 486 - Modeling and Simulation of Dynamic Systems 3 credit hours. Mathematical modeling of physical systems and simulation of linear system responses. System response to varied inputs are studied using classical techniques. Laplace transforms and modeling and simulation software. Prerequisite: (MECH 326 or CEMS 332) and (ELEC 220 or CEMS 221).

MECH 495 - Senior Design Project I 3 credit hours. Individual and group comprehensive design projects employing basic and professional approaches to planning, organizing, judgmental and economic factors. Integrative aspects of creative

design and analysis, interdisciplinary systems. Emphasis on technical communication skills. Prerequisite: Senior standing and permission of instructor.

MECH 496 - Senior Design Project II 3 credit hours. Continuation of MECH 495 and culmination in a comprehensive design report and developmental prototype, as required. Prerequisite: MECH 495.

RNEW 200 - Special Topics 1 to 3 credit hours.

RNEW 201 - Renewable Energy 3 credit hours. The main objective of this course is to gain an elementary familiarity with renewable forms of energy. The course addresses three distinct areas: power and energy, generating power from renewable sources of energy, and the economics and markets of energy. Prerequisite: MATH 152.

RNEW 255 - Power System Operation and Economics 3 credit hours. This course covers power system operation, generation scheduling, and trading. The idea is to minimize the total operation cost of a power system subject to power balance and other constraints. Different minimization methods are covered and the coordination between thermal and renewable generation are discussed. Prerequisite: MATH 151 and MATH 152.

RNEW 303 - Software Engineering 4 credit hours. Software engineering concepts and techniques, structured design and modular construction, fundamentals of programming style; high level language programming, error detection and error location techniques.

RNEW 320 - Circuit Theory II 4 credit hours. First order and second order circuits, natural and forced response, step response, passive and active filters, transformers, dependent sources (modeling, biasing, and gain calculation), Fourier series, Fourier series analysis. Prerequisite: ENGR 220.

RNEW 322 - Signals and Systems 3 credit hours. Signal and system modeling concepts, system analysis in time domain, Fourier series and transform, Laplace transform, state variable techniques, z-transform, analysis and design of digital filters, FFT and applications. Prerequisite: ENGR 220.

RNEW 400 - Special Topics 1 to 3 credit hours. Special topics in renewable energy engineering which vary from year to year.

RNEW 431 - Wind Energy 3 credit hours. The primary objective of this course is to gain an elementary familiarity with wind energy. After a brief review of power and energy, wind energy is introduced. Topics of discussion include history and evolution of wind energy technology, power in the wind, wind turbines, components and operation of typical wind systems, small scale hybrid energy systems, markets, demand, and resources. The course also includes a class project. Prerequisite: MATH 152 and PHYS 126.

RNEW 432 - Solar Energy Systems 3 credit hours. In this course we study solar radiation, theory of light, topics of heat transfer associated with solar energy, radiation characteristics of materials, collectors, energy storage, solar loads and the economics. The physics of voltaic systems will also be discussed. This course includes a design project. Prerequisite: MECH 320.

RNEW 461 - Power Electronics for Renewable Systems 3 credit hours. This course is an introduction to power electronics with emphasis on applications such as energy conservation and renewable energy. Topics include introductory switching devices, devices for power electronics, and converter design and simulation. Basic concepts of DC-DC converters in continuous and discontinuous modes are included, along

with design for motor drives and transformer-isolated switch-mode power supplies. Prerequisite: ENGR 220.

RNEW 468 - Electric Machinery 3 credit hours. Magnetic theory and circuits, balanced polyphase circuits, and fundamentals of electromechanical energy conversion. Phasors, per-unit notation, transformers, three-phase and single-phase induction motors, synchronous, direct current and specialized machines. Prerequisite: ENGR 220.

RNEW 490 - Engineering Design Methods 2 credit hours. The purpose of design is to convert resources into devices, systems. processes and products to meet human needs. Detailed analysis and application of the design problem solving process are practiced. Prerequisite: Senior standing.

RNEW 496 - Senior Design Project 4 credit hours. The student develops an original individual design project with a faculty advisor from conception to design, construction and testing. A complete report is required.

Mechanical Engineering

MECH 430 - Computational Fluid Dynamics 3 credit hours. The course is designed for students with Fluid Mechanics/Heat Transfer knowledge who want to learn CFD applications. It introduces finite difference methods to solve differential equations that arise in Fluid Mechanics/ Heat transfer. It will teach the use of CFD package Fluent.

Physics and Astronomy

College of Business Courses

Business School

DATA 156 - Introduction to Computing 3 credit hours. This course surveys the fundamental concepts of computing. Topics include algorithms and structuring programming logic, flowcharts and pseudocodes, fundamentals of object-oriented programming, developer environment, defining variables, conditional statements, loops, arrays, and user interface design.

General Education

ACCT 200 - Special Topics in Accounting 1 to 4 credit hours. Topics not covered in other accounting courses are presented.

ACCT 211 - Financial Accounting 3 credit hours. This fundamental course introduces the student to the language of business. The basic theory and practice of financial accounting is studied including the balance sheet equation, the system of debits and credits, transaction analysis, adjusting entries, financial statement preparation, closing entries, income determination and the accounting for assets and liabilities. Prerequisite: Sophomore or higher class standing.

ACCT 212 - Managerial Accounting 3 credit hours. The second course of study of the fundamental principles of accounting has an emphasis on managerial accounting. The application of the accounting model on investments, long term liabilities and corporate stockholders' equity is studied. The course also introduces the student to the basics of managerial accounting information and the cost of goods manufactured, explains approaches to costing products and services and explains managerial accounting's use in decision making, planning and controlling the business. Prerequisite: ACCT 211.

ACCT 300 - Special Topics in Accounting 1 to 4 credit hours. A concise overview of the fundamental theories of financial and managerial accounting. This course is designed to provide a comprehensive perspective of the accounting field. Topics will include the accounting process, costing, budgeting, and accounting theories. The course is designed to give an accounting background to the non-accounting student. No Prerequisite. *Course cannot be used as a substitute for ACCT 211 or ACCT 212.

ACCT 310 - Forensic Accounting Introduction 3 credit hours. This course is designed to give a basic overview of the world of forensic accounting and its application in today's society. We start with the foundational areas and then learn about types of fraud examination and forensic accounting. We delve into more specific fraud areas covering internal organization issues dealing with employees and vendors. We also take time to discuss the areas of bankruptcies and identity thefts. Topics of discussion include prevention, detection, and investigation of fraud while applying our new skills to real world situations. Prerequisite: ACCT 211.

ACCT 320 - Accounting-Healthcare Managmnt 3 credit hours. This course is geared towards the student or healthcare manager who needs a basic grounding in financial accounting and analysis within health care organizations. Information on how financial statements are prepared and used in health care organizations is emphasized.

ACCT 325 - Quick Books Online for Acct 3 credit hours. Using the Quick Books online version, this course covers how to setup a client file, enter transactions, and

prepare financial statements using Quick Books. It also demonstrates how to process payroll, do budgeting, and create various reports as needed. Students use the textbook as a guide to using the Quick Books software. The students also receive Quick Books software access for 5 months. They use the software extensively in the course. After taking this course a student would be prepared to take the Quick Books certification exam.

ACCT 361 - Intermediate Accounting I 3 credit hours. This course expands and broadens the accounting concepts and principles developed in previous accounting courses. The course considers the conceptual framework underlying the financial statements and focuses on the recognition and measurement of income, assets, and liabilities. Prerequisite: ACCT 211, junior standing.

ACCT 362 - Intermediate Accounting II 3 credit hours. The continuation of the accounting principles and concepts discussed in Intermediate I. Major emphasis is on debt financing, equity financing, investments in debt securities and equity securities, leasing, employee compensation and pensions, and earnings per share. Prerequisite: ACCT 361, junior standing.

ACCT 371 - Personal Income Tax 3 credit hours. The importance of income taxation relating to individual decisions and the need for tax research and planning is emphasized. This course covers preparation of individual returns with detailed analysis of the underlying tax concepts. Prerequisite: ACCT 211, junior standing.(Offered Fall, every year)

ACCT 372 - Cost Accounting 3 credit hours. Analysis of cost behavior, cost-profit volume analysis, budgeting, job order and process cost systems, standard costs and cost control. Quantitative methods and behavioral developments are applied to cost accounting data. The objective is improvement of the quality of the cost information provided for managerial decision making. Prerequisite: ACCT 212, ECON 201, junior standing.

ACCT 400 - Special Topics 3 credit hours. This course details major issues in the field of accountancy with primary topics changing from semester to semester. Prerequisite: 6 hours of accounting coursework. May be taken more than once for credit.

ACCT 441 - Auditing Theory and Practice 3 credit hours. Current auditing practices and objectives of independent accounting firms examined in detail. Particular emphasis placed on auditing theory and procedures and the ethical and legal responsibilities of auditing. Prerequisite: ACCT 362 either previously or concurrently.

ACCT 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

ACCT 460 - Seminar in Accountancy 3 credit hours. The seminar in accounting examines major contemporary issues in the field. Issues covered may include topics such as taxes, financial accounting theory, C.M.A and C.P.A problems, or international accounting problems. Students are responsible for presenting, discussing, and writing about ideas expressed in the professional literature. Prerequisite: 6 hours of accounting coursework.

ACCT 462 - Advanced Accounting 3 credit hours. An advanced course in the theory of financial accounting with heavy emphasis on special problem areas in accounting such as partnership accounting, home office and branch accounting, mergers and acquisitions, consolidated statements, bankruptcy, estates and trusts, fund accounting

and international accounting problems. The current pronouncement of the major authoritative bodies reviewed and illustrated. Prerequisite: ACCT 362.

ACCT 471 - Corporate Taxation 3 credit hours. A continuation of Personal Income Tax. Emphasis is on corporate taxation. Corporations to be examined include C Corps, S Corps, and the Limited Liability Corporations. Taxation of partnerships, estates, and trusts will also be covered. Prerequisite: ACCT 371.

ACCT 485 - Internship 1 to 4 credit hours.

BUSI 100 - Topics in Business 1 to 3 credit hours.

BUSI 105 - Business Perspectives 1 credit hours. This course is a survey of business concepts, principles, techniques and theories. The goal of the course is to expose students to the need for a high level of awareness of the business function interactions a decision maker faces in a competitive information-driven world. Topics covered include, but are not limited to, the following: global business environment, marketing, production operations, information technology, and innovation management.

BUSI 106 - Contemporary Business 3 credit hours. Students gain experience in the creation and operation of a business either through simulation or an actual business. Through this experience, students have primary exposure to all of the business functions: accounting, finance, marketing, information systems and management. Open to first-year students in the School of Business or by permission of instructor.

BUSI 113 - Descriptive Analytics & Statistics 3 credit hours. The elements of basic statistical theory and technique are introduced with an emphasis on applications to business situations. Computer-based software packages complement these objectives.

BUSI 150 - Business Analytics Math 3 credit hours. Students will have an understanding of the fundamentals of linear algebra and calculus as they are applied to business analytics and be able to apply this knowledge in future courses and generate working analytical models.

BUSI 213 - Research Methods 3 credit hours. This course introduces students to research methods in business. Students learn how to develop a research idea, obtain data, statistically analyze the data, and explain the results. Real world business research is also covered. Prerequisite: BUSI 113.

BUSI 261 - Operations Research 3 credit hours. Scientific approach to the analysis and solution of economic and business problems to provide a quantitative basis for model building and decision making. Mathematics is applied to business decision making through techniques such as linear programming, queuing theory, network models, Markov analysis, etc. Prerequisite: MATH 107 and BUSI 113; ECON 201 either previously or concurrently.

BUSI 300 - Topics in Business 1 to 4 credit hours. Topics not covered in other Business courses are presented.

BUSI 301 - Family Business Management 3 credit hours. This course explores the unique issues that a family business encounters from its initial founding through its generational development and to its ultimate success or demise. Family businesses that prosper generation to generation pursue unconventional strategies. Because they are values-driven and think very long-term, it is theorized that successful family businesses take approaches not commonly found in the current management practices at most companies. Issues addressed include: family firm performance, family business culture,

challenge of succession, conflict and harmony, business vs. family communication, family constitution, and corporate vs. family business governance.

BUSI 302 - Entrepreneurship in Practice 2 credit hours. This course is designed around the actual operations of an established student-run business. Students will: market, stock, staff and operate a small business; provide the management of the business; and generate and report on financial results.

BUSI 305 - German Auto Industry 4 credit hours. This faculty-led travel course explores the basic concepts of international business strategy, German culture and some history. We focus on the German auto industry, lean manufacturing, and global competition. Students form teams with German counterparts to compete in an international business simulation. Travel to Germany for 7-10 days is a required part of this course. Prerequisite: Sophomore standing or permission of instructor.

BUSI 306 - Business Intelligence 3 credit hours. This course concentrates on the foundations of computerized support for managerial decision making. It focuses on decision making theory, identifying a company's information requirements, data warehouse design, modeling techniques for decision making, and introduces a broad range of business analytics tools.

BUSI 439 - Entrepreneurship in the 21st Century 3 credit hours. The primary objectives of this course are twofold: 1) provide students with an introduction to the theoretical and practical aspects of entrepreneurship and small business development, and 2) identify, probe and gain insights into the role family based business plays in socio-economic development and private enterprise.

BUSI 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

BUSI 457 - International Business 3 credit hours. The volume, composition, and pattern of worldwide trade; the significance of international trade to the American economy. An introductory description of the international payments mechanism, an elementary analysis of the balance of payments, and a survey of U.S. continental policies, the role, impact and structure of the multinational enterprise and the government policies towards it, firms, marketing, accounting and management responses to the international environments. Prerequisite: Junior standing.

BUSI 460 - Seminar in Business 3 credit hours. The seminar in business examines major contemporary issues in the field of business administration. Students are responsible for presenting, discussing, and writing about ideas, theories, frameworks, and applications within the field of business.

BUSI 485 - Internship 1 to 4 credit hours. Faculty-supervised experience in which the student applies theoretical knowledge in practical situations. Each student submits a paper outlining the experience and is responsible for procuring an on-site supervisor's evaluation of his/her work. A minimum of 80 hours of practical experience is required for each credit. A maximum of four (4) internship credits can be included in the 120 academic credits required for graduation.

BUSI 499 - Business Policy 3 credit hours. This capstone course assumes an integrative business approach to the application of strategic management. The purpose of course is to assure students of understanding and utilizing the principles and practices in attaining and sustaining competitive advantage in the market place. Prerequisite: MGMT 328, FIN 348, MKTG 221; Senior standing.

DATA 105 - Analytics Perspectives 1 credit hours. This course is a survey of analytics concepts, principles, techniques and theories. The goal of the course is to expose students to how analytics assists a decision-maker in a competitive information-driven world.

DATA 201 - Analytics II 3 credit hours. This course expands on the data analytics techniques and methods introduced in MIS 101. Students advance their skills in understanding problems, developing modelling strategies, gathering, organizing, and processing raw data, and interpreting and communicating the results.

DATA 202 - Data Visualization and Analysis 3 credit hours. This course will convey the fundamental concepts of data visualization and analysis. Students will develop a toolkit of skills to analyze, interpret, and communicate data. Emphasis is on understanding how to analyze data through visualization methods.

DATA 203 - Current Topics in Analytics 3 credit hours. Students will gain a contextualized understanding of practices and trends in digital media, advertising, marketing, and public relations as it relates to data analysis. In addition to studying the uses of data analytics in disseminating information at large, students will learn the ethics and biases evident in the field and their applications to society as a whole.

DATA 401 - Analytics Capstone Project 3 credit hours. Students will demonstrate mastery of analytic concepts, methods and skills by completing a project linking academic learning with a real-world analytic problem. Upon completion of the project, students will communicate results in both written and oral communications. Projects may be individual or team based, and may focus on a real-world or a research application.

DATA 402 - Analytics Seminar 1 credit hours. This course is an opportunity for students to learn from each other, as well as professionals in the area of data analytics. Sharing experiences and learning from their capstones, as well as exploration of additional topics in data analytics related to the aspirations of the students.

ECON 100 - Topics in Economics 1 to 4 credit hours. Topics not covered in other economics courses are presented.

ECON 201 - Principles of Microeconomics 4 credit hours. Introduction to the principles of microeconomics and a survey of contemporary economic issues. Includes study of market systems and structures, government regulation of business, labor markets and income distribution, strategic behavior, and market failure. Prerequisite: sophomore standing.

ECON 202 - Principles of Macroeconomics 3 credit hours. Study of the factors involved in the problems of unemployment, inflation, economic growth, and the role of fiscal and monetary policies. Includes coverage of the money and banking system and international trade. Prerequisite: BUSI 150, MATH 104, any mathematics course or permission of instructor.

ECON 300 - Topics in Economics 1 to 4 credit hours. Topics not covered in other Economics courses are presented.

ECON 310 - Applied Econometrics and Predictive Analytics 3 credit hours. The course will cover tools necessary to conduct empirical research in economics and related disciplines. Students will learn how to analyze data using multiple regression methods and interpret the statistical models in order to understand causal effects.

ECON 320 - Sports Economics 4 credit hours. This course covers the economics of sports and sports leagues. We examine sports market outcomes, the economics of team sports and broadcasting labor issues including determination of player pay, and public financing aspects of sports teams including stadium financing, taxes, and competition policy. We also cover topics relevant to college sports. Prerequisite: ECON 201 or permission of instructor.

ECON 331 - Money and Banking 3 credit hours. The principles and organization of the monetary and banking system and importance of the money supply. The structure of the banking system and the techniques used by the Federal Reserve are covered, along with monetary theory, other factors affecting income, employment and inflation, the controversies surrounding the use of monetary and fiscal policies and the international dimensions of the issues. Prerequisite: ECON 201/202, junior standing.

ECON 412 - International Economics 3 credit hours. An introduction to the workings of the world economic system and the interactions among different countries. It consists of three parts: Trade, which asks how and why different countries engage in the process of exchanging goods and services and the consequences of such interactions; International financial and monetary system, which looks at a country's balance of payments account, exchange rate determination, and open macroeconomic analysis and policy; International development, which surveys experiences of developing countries, including their relationship with developed countries. Students analyze developments in the world economy, and judge the soundness and/or appropriateness of government actions. Prerequisite: ECON 201/202, junior standing.

ECON 420 - Healthcare Economics 3 credit hours. This course provides an overview of health economics. It largely focuses on empirical research on determinants of health but also provides a basic theoretical framework of health economics.

ECON 425 - Wealth and Inequality 4 credit hours. This course explores the distribution of wealth and inequality from the economic and policy perspectives. We seek to understand how wealth and income are measured and ask what ae their distributed concerns, and what conclusions can we draw concerning inequality? Prerequisite: Junior/Senior standing or permission of instructor. (Cross-listed as SJST 425)

ECON 445 - Managerial Economics 3 credit hours. Emphasizes the application of fundamental theoretical and analytical tools of economics useful in managerial decision making. Empirical studies and cases involving actual managerial situations at the levels of industry and firms are examined. Prerequisite: FIN 348 or permission of instructor. (Cross-listed as FIN 445)

ECON 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

ECON 460 - Seminar in Economics 3 credit hours. The seminar in economics examines major contemporary issues in the field. Students are responsible for presenting, discussing, and writing about ideas, theories, frameworks, and applications within the field expressed in the professional literature. Prerequisite: One course in Economics numbered 300 or above.

ECON 462 - Industrial Organization 3 credit hours. In this course, the theory of the firm is extended using the structure-conduct-performance paradigm and more recent theories of industrial organization. An important portion of the course is allocated to presentation of factual and institutional material on market structure, firm conduct,

industry performance, and antitrust policy. Prerequisite: ECON 201/202 and junior standing.

FIN 205 - Student Managed Investment Fund 1 credit hours. A lecture course designed to introduce topics that facilitate the student's ability to participate in the management of the Student Managed Investment Fund. Topics covered include but are not limited to the following: History of Equity Ownership; Debt and Equity Securities; Ratio Analysis; Risk and Return (beta and portfolio analysis), Financial Publications, Research Tools and Databases, Analysis of Financial Statements, Stock and Bond Valuation Techniques; Financial Markets and Stock Screening. Corequisite: FIN 206.

FIN 206 - Student Managed Investment Fund Laboratory 1 credit hours. Students gain practical experience in managing a stock portfolio by engaging in the trading of stocks under the supervision of faculty. This 1.00 credit course may be repeated for credit to a maximum of five credit hours. Prerequisite: FIN 205. Satisfies the field experience requirement for School of Business majors.

FIN 300 - Topics in Finance 1 to 3 credit hours. Topics not covered in other finance courses are presented.

FIN 306 - Student Managed Investment Fund Advanced Laboratory 2 credit hours. Students build on their experience in managing a stock portfolio by engaging in the trading of stocks under supervision of faculty. Students manage an individual portfolio using advanced trading strategies and present a special topic on investing. This course may be repeated one time for credit. Prerequisite: FIN 205, FIN 206, junior standing and permission of instructor.

FIN 310 - Introduction to Financial Planning 3 credit hours. In this course students are introduced to the concepts of estate and financial planning. The goal is to provide the student with a firm grounding in the basic lifetime financial planning process along with an overview of the tax advantages of proper estate planning.

FIN 322 - Finance Analytics 3 credit hours. Students will work with historical databases and current data to conduct analyses via time series models, such as ARIMA, conditional heteroskedastic models (ARCH type models), and multivariate time series such as VAR models. These will be applied to evaluate risk and return of the main products of capital markets.

FIN 348 - Managerial Finance 3 credit hours. An introductory course explaining the tools and the new responsibilities modern financial managers deal with in a rapidly changing world environment characterized by uncertainty. The course identifies and examines the financing needs of the firm, its cost of capital, and assets and liabilities management using modern decision support systems for the application of new financial innovations, such as contingent claims and securitization of assets. Prerequisite: ACCT 211/212, ECON 201/202.

FIN 445 - Managerial Economics 3 credit hours. Emphasizes the application of fundamental theoretical and analytical tools of economics useful in managerial decision making, through an examination of empirical studies and cases involving actual managerial situations at the levels of industry and firms. Prerequisite: FIN 348 or permission of instructor. (Cross-listed as ECON 445)

FIN 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

FIN 454 - Security Analysis 3 credit hours. Provides a comprehensive introduction to the application of the techniques of security analysis and portfolio management. Relates economic-industry-company analysis to evaluate individual securities: bonds, preferred stocks, common stocks, and options. Considers the procedures involved in the selection of securities portfolio along the concept of risk-return tradeoffs. Prerequisite: FIN 348.

FIN 455 - Business Financial Decisions 3 credit hours. Examines the question of how financial resources available to the firm should be allocated to many possible investment projects. Emphasizes developing analytical techniques which make it possible to answer questions such as: Should a new plant be built? Equipment replaced? Bonds refunded? A new product introduced? Should a merger or divestment take place? Prerequisite: FIN 348.

FIN 458 - International Financial Management 3 credit hours. Emphasizes the practical relevance of the microelements of international finance which influence the profit and loss accounts and balance sheets of corporations with overseas operations. Factors such as the impact of exchange rate fluctuations, major alternative non-traditional sources of financing and regional investment decisions, imperfections in world product, factor and financial markets along with country risk-return profiles are examined. Prerequisite: FIN 348 or permission of instructor.

FIN 460 - Seminar in Finance 3 credit hours. This seminar course examines major contemporary issues in the field of finance. The topics covered vary from semester to semester. Students are responsible for presenting, discussing, and writing about theories, frameworks, and application expressed in the professional literature. Prerequisite: One course in Finance numbered 300 or above.

HLPM 201 - The Health Care Delivery System 3 credit hours. This course is an overview of the components and operations of the US Healthcare System. The development of the Healthcare System including major factors that have driven its evolution over time are reviewed. We study the healthcare system by reviewing the foundations, resources and process of the system and their impact on outcomes.Students learn about public policy, governmental regulations and economic drivers of the healthcare system.(Offered Fall, even years)

HLPM 205 - Public Health 3 credit hours. In this course we explore public health concepts and Issues in community health.Areas covered include individual, social and environmental determinants of health and disease, including epidemiological concepts and methods for gathering information in the public health area, as well as a description of risks. (Offered Fall, even years)

HLPM 300 - Topics in HLPM 1 to 3 credit hours. Topics not covered in other Health Planning and Management courses are covered. Topics vary each term.

HLPM 301 - Healthcare Policy 3 credit hours. This course introduces the student to the relationship between power and political behavior and how this intersection affects public policy and ultimately healthcare outcomes. Students learn effective methods to anticipate and respond to political situations, as well as develop strategies for building collaborative relationships with the multiple stakeholders that participate in healthcare. The concepts of power will be examined in the context of politics and policy setting. (Offered Fall, odd years)

HLPM 302 - Healthcare Management 3 credit hours. This course will provide the student with an overview of healthcare management and organizational behavior unique to healthcare. The organization and governance of healthcare organizations will be

presented. Areas like healthcare finance and information technology which have a unique perspective in healthcare will be an important part of this course. (Offered Allen Term, odd years)

HLPM 304 - Power and Politics in Health Care 3 credit hours. Student apply concepts related to the relationships between power and political behavior and how this intersection affects outcomes. Students learn effective methods to anticipate and respond to political situations, as well as develop strategies for building collaborative relationships with multiple constituencies in healthcare. The concept of power is examined in the context of politics and policy setting. (Offered Allen Term, Summer)

HLPM 308 - Health Care Finance for Non-Financial Managers 3 credit hours. This course introduces financial management concepts to the non-financial manager. Healthcare organizations are the focus but concepts apply to all nonprofit organizations. Topics include financial and managerial accounting as they apply specifically to health care services and the theory and practice of how financial information is gathered and used to provide meaningful conclusions about the financial position and performance of health care organizations.(Offered Allen Term, Summer)

HLPM 310 - Legal and Ethical Issues in Healthcare 3 credit hours. In this survey course of the law and ethics students study legal and ethical issues of importance to health care managers. Ethical issues are an important aspect of the discussion of the legal principles involved in health care administration and are interwoven in the framework of the overall course. Students gain knowledge of special issues in health care including the principles of liability, social responsibility, patient rights and responsibilities, acquired immune deficiency syndrome, access to health care and payment issues. (Offered Spring, even years)

HLPM 485 - Internship 1 to 3 credit hours. The internship is a faculty-supervised experience in which the student applies theoretical knowledge of healthcare issues in practical situations. Each student submits a paper outlining the experience and is responsible for procuring an on-site supervisor’s evaluation of his/her work. A minimum of 180 hours of practical experience is required for the major in Health Planning and Management. Prerequisite: Permission of instructor. (Offered Allen Term, Spring, Summer alternate years)

HLPM 495 - Seminar: Healthcare Planning and Management 3 credit hours. This course is a faculty-supervised field experience which gives the student an opportunity to apply classroom knowledge to actual health care delivery situations. The seminar following this experience provides discussion of the key factors contributing to the most critical issues in health care today. The class benefits from students sharing their internship experiences in health-related organizations. Topics include risk management, corporatization of health care, the continuum of long term care, multi-institutional systems, access to health care, and allocation of health care resources. Case studies are used. Prerequisite: Permission of instructor. (Offered Fall, even years)

LAW 241 - The Legal Environment of Business 3 credit hours. An introduction to the body of law associated with the business environment. Topics include the judicial system and court procedure, business torts and crimes, contracts, bailments, forms of business structure, bankruptcy, an overview of securities regulations and the antitrust laws and consumer protection statutes.

LAW 300 - Special Topics 1 to 3 credit hours. Topics not covered in other Law courses are presented.

LAW 442 - Commercial Law 3 credit hours. An overview of the common law principles and statutory law affecting commercial transactions. Topics include agency, partnerships, corporations, commercial paper and sales. Prerequisite: LAW 241, junior standing.

LEAD 100 - Topics in Leadership 1 to 4 credit hours.

LEAD 201 - Equality and Leadership 2 credit hours. The course explores leadership theory and issues of equality and leadership. We examine questions such as: what qualities make an effective leader, why are so few women and minorities in leadership roles in certain professions. We approach these questions from both a personal and academic perspective. Participants assess their own leadership style and develop a personal philosophy of leadership.

LEAD 300 - Special Topics in Leadership 1 to 4 credit hours. In this course we explore areas not covered by other leadership courses. Topics vary from term to term.

LEAD 301 - Improving Alfred University 2 credit hours. This course is an applied consulting class. Enrollment is open to students from across Alfred University's various academic units. The course provides students with exposure to leaders, primarily alumni, from a wide variety of different professional fields. It provides insight to the inner workings of the university and its strategic plan. Finally, the course generates significant ideas for improvement for our university.

LEAD 450 - Independent Study 1 to 4 credit hours.

LEAD 475 - Leadership Practicum 2 credit hours. The course explores leadership theory and issues of equality and leadership. We examine questions such as: what qualities make an effective leader, and approach questions from both a personal and academic perspective. Participants assess their own leadership style and develop a personal philosophy of leadership. Prerequisite: LEAD 201.

LEAD 476 - Service Leadership Experience 2 credit hours. The course is designed for students interested in a hands-on experience with social leadership ventures. Students research social, cultural and economic issues related to the community of their chosen project – either an instructor-designated organization or a community improvement project in their own region. Pre- or Co-requisite: LEAD 475.

MGMT 300 - Topics in Management 1 to 4 credit hours. Topics not covered in other Management courses are presented.

MGMT 305 - Gender and Organizations 3 credit hours. This course builds an understanding of gender issues within organizations as well as policies that organizations can implement to create a more equitable work environment. Topics of discussion encompass the impact of gender on communication, influence, and perceptions of competence, what progress has been made regarding gender equality and what still remains to be resolved. (Cross-listed as WGST 305)

MGMT 318 - Gender Equity in Business 3 credit hours. In this course we explore gender equality issues in leadership. Students examine the challenges/opportunities for women at various phases of careers/levels. This includes the socio-cultural, psychological, organizational, political, and economical issues facing women in business today with reflection on students' experiences. (Cross-listed as WGST 318)

MGMT 322 - Management Analytics 3 credit hours. Management Analytics is an advanced course with application of data analytics to management techniques. Topics include creation and management of dashboards, management of KPIs, statistical

quality control methods, system modeling and optimization methods, combined with decision-making tools. Covers advanced methods for management by fact and data in a business environment.

MGMT 328 - Management and Organizational Behavior 3 credit hours. This course builds an understanding of individual and group behavior within organizations, the means of assessing such organizational behavior and specific techniques for managing behavior toward improved performance. The goal for the course is for students to develop skills grounded in behavioral science that are essential for assuming a leadership position in organizational environments. Prerequisite: Junior standing.

MGMT 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

MGMT 460 - Seminar in Management 3 credit hours. The seminar in management examines major contemporary issues in the field. Examples of topics include corporate culture, creativity, computer based simulations, total quality management, managing strategic change, and human capital development. Students are responsible for presenting, discussing, and writing about ideas, theories, frameworks, and applications within the field of management. Prerequisite: MGMT 328.

MGMT 472 - Human Resource Management 3 credit hours. Examines the contribution that a properly functioning personnel department makes to the effectiveness of a business. Covers internal organization and workings of the personnel department, its relationship to the rest of the enterprise, major problem areas, and the legal environment defining the employer-employee relationship. Prerequisite: MGMT 328.

MGMT 484 - Operations Management 3 credit hours. Introduces students to functions, problems, and techniques associated with management of production operations in manufacturing firms and service organizations. The problem oriented approach focuses on analytical techniques so students learn to recognize problems arising in operations management areas and to apply analytic techniques meaningfully. Topics include plant location, plant layout and design, inventory control, quality control, production planning and control (including PERT), production scheduling, queuing, mathematical programming, simulation, and forecasting. Prerequisite: ACCT 212, (BUSI 113 or ENGR 305), and junior standing.

MIS 101 - Analytics I 3 credit hours. This course introduces a series of data analytics techniques and methods. Students will begin developing foundational skills to understand problems, create modeling strategies, gather, organize, and process raw data, and interpret and communicate the results.

MIS 390 - Introduction to Management Information Systems 3 credit hours. This course in information theory covers the subjects of computer hardware and software, the system development process, principles of data management and modern computer-based information systems. Emphasis is placed on business problem analysis and development of computer-based business applications. Prerequisite: junior standing.

MIS 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

MKTG 221 - Marketing Principles and Management 3 credit hours. A survey of marketing concepts, principles, techniques and theories. Emphasizes the development

and implementation of an effective marketing strategy, and control of the marketing function within the firm. The role of marketing in society and the efficient distribution of goods and services are addressed. Prerequisite: Sophomore standing.

MKTG 300 - Topics in Marketing 1 to 3 credit hours. Topics not covered in other Marketing courses are presented.

MKTG 311 - Digital & Social Media Mrkting 3 credit hours. In this course, aspiring managers will learn how to construct a strategy that creates, communicates, and delivers value over digital communication and delivery channels. Prior knowledge of digital and social platforms are not required.

MKTG 322 - Marketing Analytics 3 credit hours. This course explores data analysis techniques and its theoretical foundations applied to the field of marketing. Through business exercises, students will work with various forms of data learning how to best use this information to improve marketing insights, outcomes and to develop more effective marketing campaigns.

MKTG 400 - Seminar in Marketing 3 credit hours. Intensive investigation of marketing techniques, theories and issues. Students are required to investigate specific topics, make class presentations and submit reports. Prerequisite: MKTG 221 and senior standing.

MKTG 450 - Independent Study 1 to 4 credit hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

MKTG 452 - Market Research 3 credit hours. Emphasizes planning, organization and application of marketing research in making marketing decisions. Topics include: marketing information systems, research design, data collection and analysis, and evaluating research results. Emphasis given to sampling methods, hypothesis testing, market measurement and forecasting, use of models in marketing, decision making techniques, and behavioral research methodologies. Cases are used as part of the course. Prerequisite: MKTG 221.

MKTG 453 - Marketing Practicum 3 credit hours. Marketing Practicum is a course that puts theory into practice. Students interact with clients to determine what marketing technique would best facilitate their business. Once determined, students execute and develop a marketing plan. Prerequisite: MKTG 221.

MKTG 454 - Market Intelligence & Strategy 3 credit hours. This course explores the actionable information needs of modern business for market intelligence and business analysis to aid in developing strategy. This course integrates quantitative insights from analytics with qualitative trending from market intelligence to develop effective communication product for the decision maker.

MKTG 460 - Seminar in Marketing 3 credit hours. The seminar in marketing examines major contemporary issues in the field. Students are responsible for presenting, discussing, and writing about ideas, theories, frameworks, and techniques of marketing. Prerequisite: MKTG 221.

MKTG 479 - Consumer Behavior 3 credit hours. Deals with changing markets and the influence of environmental and interpersonal factors on consumer behavior. Integrates concepts, theories and tools from social science and quantitative disciplines to provide a framework of understanding consumers and forecasting market demand.

Different strategies and techniques of consumer research are presented and evaluated. Prerequisite: MKTG 221.

MKTG 482 - Sales Management 3 credit hours. Concerned with the management of the personal selling function, this course uses theories and tools of behavioral sciences for developing an effective sales force through recruiting, selection, training, compensating and evaluation of sales performance. Emphasizes sales forecasting, establishment of sales quotas, and sales analysis. Prerequisite: MKTG 221.

MKTG 486 - Integrated Marketing Communications 3 credit hours. Investigates current theory and methods of promotion. The major elements of the promotional mix are analyzed in detail with emphasis on using pertinent decision theory models when allocating scarce resources to the defined elements of the total promotional mix. Prerequisite: MKTG 221.

MKTG 489 - International Marketing 3 credit hours. Emphasizes marketing management problems, techniques and strategies in the global marketing environment and the culture dynamics involved in international marketing. Strategies are developed for product, price, promotion and distribution functions given the complex international legal environment and consumer customs in foreign business. Prerequisite: MKTG 221.

MKTG 499 - Strategic Marketing Management 3 credit hours. This capstone course offers students the opportunity to focus their experience and knowledge of marketing on an aggressively competitive environment. The course will explore ways in which corporate strategy can be executed by marshalling marketing-oriented resources, and directing them to the achievement of marketing goals. Prerequisite: MKTG 221 and one additional MKTG course.

SJST 425 - Wealth and Inequality 4 credit hours. This course explores the distribution of wealth and inequality from the economic and policy perspectives. We seek to understand how wealth and income are measured and ask what ae their distributed concerns, and what conclusions can we draw concerning inequality? Prerequisite: Junior/Senior standing or permission of instructor. (Cross-listed as ECON 425)

WGST 305 - Gender and Organizations 3 credit hours. This course builds an understanding of gender issues within organizations as well as policies that organizations can implement to create a more equitable work environment. Topics of discussion encompass the impact of gender on communication, influence, and perceptions of competence, what progress has been made regarding gender equality and what still remains to be resolved. (Cross-listed as MGMT 305)

WGST 318 - Gender Equity in Business 3 credit hours. In this course we explore gender equality issues in leadership. Students examine the challenges/opportunities for women at various phases of careers/levels. This includes the socio-cultural, psychological, organizational, political, and economical issues facing women in business today with reflection on students' experiences. (Cross-listed as MGMT 318)

Registered Academic Programs

The following programs of study are offered by Alfred University. Their Higher Education General Information System (HEGIS) codes are listed to allow cross-reference between Alfred University and other New York institutions. These codes may be requested by state and federal offices when filing for loans and awards.

Note: Enrollment in other than registered or otherwise approved programs may jeopardize a student's eligibility for certain student aid awards.

Major	HEGIS Code	Degree Awarded
Accounting	0502	BS
Art and Design	1001.10	BFA
Art History and Theory	1003	BS
Athletic Training	1299.30	BS
Biology	0401	BA or BS
Biochemistry	0414	BS
Biomaterials Engineering	0905	BS
Business Administration	0506	BS
Business Analytics	0599	BS
Business and Marketing	0501	BS
Ceramic Engineering	0916	BS
Chemistry	1905	BA or BS
Communication Studies	0601	BA
Computer Science	0701	BA
Criminal Justice Studies	2105	BA
Data Analytics	0799	BS
Early Childhood/ Childhood Education	0802	BS
Economics	0517	BS
English	1501	BA
Environmental Studies	0420	BA
Finance	0504	BS
Foreign Language and Culture Studies	1199	BA
General Science	4902	BA
Geology	1914	BA
Gerontology	2299.10	BA
Glass Engineering Science	0916	BS
Global Studies	2210	BA
Health Fitness Management	0599	BS
Health Planning and Management	1202	BS

Major	HEGIS Code	Degree Awarded
History	2205	BA
Individually Structured Major	4901	BA
Interdepartmental Major	4901	BA
Life and Physical Sciences	4902	BA
Marketing	0509	BS
Materials Science and Engineering	0915	BS
Mathematics	1701	BA or BS
Mathematics with Actuarial Science	1701	BS
Mechanical Engineering	0910	BS
Middle Childhood/ Adolescence Educ-Earth Science	1917.01	BA
Middle Childhood/ Adolescence Educ-Social Studies	2201.01	BA
Middle Childhood/ Adolescence Educ-Biology	0401.01	BA
Middle Childhood/ Adolescence Educ-Chemistry	1905.01	BA
Middle Childhood/ Adolescence Educ-English	1501.01	BA
Middle Childhood/ Adolescence Educ-French	1102.01	BA
Middle Childhood/ Adolescence Educ-Math	1701.01	BA
Middle Childhood/ Adolescence Educ-Physics	1902.01	BA
Middle Childhood/ Adolescence Educ-Spanish	1105.01	BA
Music	1005.00	BA
Philosophy	1509	BA
Physics	1902	BA
Political Science	2207	BA
Psychology	2001	BA

Major	HEGIS Code	Degree Awarded
Renewable Energy Engineering	0999	BS
Sociology	2208	BA
Spanish	1105	BA
Special Subjects: Visual Arts	1002	BFA
Theatre	1007	BA

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PhD, New York University
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Acting Dean, CLAS

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Psychology and Communication Studies

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BA, Stonehill College
MS, PhD, Saint Louis University

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Bethany Johnson (2011)
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Louis J. Lichtman (1970)
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Robert J. Maiden (1982)
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Communication Studies Program

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PhD, Pennsylvania State University (Women's Studies)
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Michele and Martin Cohen Dean, School of Art and Design

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Director, Fosdick-Nelson Gallery

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