Alfred University

Outside of Ordinary

2024-2025 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. What is in the catalog for a student's matriculated year will be reflected on the student's degree audit. 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. and working with their advisors.
- 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.

Accreditation

Alfred University is accredited by:

- Middle States Commission on Higher Education
- New York State Board of Regents, and the Commissioner of Education
- Engineering Accreditation Commission of ABET, https://www.abet.org.
- 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
- Council on Accreditation of Counseling and Related Educational Programs
- Association for Advancing Quality in Educator Preparation

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 2024-25, 2025-26, and 2026-27

Admissions

First-Year Applicants

Academic Preparation

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.

Performing Arts Division

- 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.

Procedures for First-Year Applicants

Applicants should submit the following items when applying for admission:

- Application for Admission via the Common Application or Alfred University Application
- 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
- Optional submission of 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 Action 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.

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 December 1 and receive a decision by December 15. Accepted early action candidates will have until May 1 to make their decision on attending Alfred University.

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 deposit is due by May 1 (non-refundable after May 1).

Financial aid applicants will receive a financial aid award beginning in mid-November. Complete the Free Application for Federal Student Aid (FAFSA) to be considered.

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 their 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.

Notification of First-Year Applicants

Notification for Early Action applicants begins in November and continues on a rolling basis until January 15 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 after May 1.

Admissions

Policy for Applicants

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
- 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), International English Language Test System (IELTS), Duolingo, or another form of English Proficiency. Scores must not be over two years old, TOEFL minimum score is 79, IELTS minimum score is 5.5.
- Standardized Tests:
  SAT and ACT standardized tests are optional.
- 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.

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 July 1 for fall enrollment or November 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 July 1 for fall enrollment or November 1 for spring enrollment:

- A brief statement indicating why you wish to return to Alfred University and what you have been doing during your time away
- Letter of Recommendation
- Transcripts of any college level coursework completed elsewhere after leaving Alfred University

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

Arthur O. Eve Opportunity Programs: Educational Opportunity Program (EOP); Higher Education Opportunity Program (HEOP)

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 non-matriculated student course information and 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 learn more about our Military Affairs services and 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.
- 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 their current academic program and paying the required $300 deposit.

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, Housing and Meals 2024-2025

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 2024-2025 academic year.

Liberal Arts & Sciences and Business	$40,180
Mechanical, Renewable Energy, and Undecided Engineering	$40,180
Art and Design, Biomaterials Engineering, Ceramic Engineering, Glass Engineering Science, and Materials Science and Engineering	
New York State Residents	$23,430
Non-NY State Residents	$40,180
Student Service Fee	$1,320 per year
Average Housing and Meal Plan (on campus)**	$15,380

* Tuition rates are subject to annual increases.
** The amount in the cost of attendance estimate table is a result of guidance from the federal government about how universities calculated published cost estimates. The actual price you pay for housing and meal plan will be determined by the options you select.

The above figures do not include costs for books and supplies. The rates listed apply only to the 2024-2025 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.

Housing and meal 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 twenty are billed at a part-time instruction rate for the extra credits. The overload tuition rate is the normal tuition rate per credit hour. 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 2024-2025 are charged at a rate of $1230 per credit hour and there is a part-time student service fee of $120.

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 2024 through August 2025 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 $400 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 housing 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 after the semester begins.

Students who withdraw or take a leave of absence after the semester begins or otherwise drop the meal plan will be charged $100 plus a prorated amount of the balance of the meal payment, or the balance of the meal payment; whichever is less. The prorated amount is based on the number of calendar weeks of the semester that have elapsed. Housing 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 housing and meal costs are estimated at $11,950 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 $2,280 in travel and personal expenses. Commuter students should estimate about $4,035 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 June and must be paid by August 1st. Statements covering charges for the second semester are available during November and must be paid by January 1st. 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.

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 third week of classes each semester. Any student with an available credit can use it to purchase books and supplies from the bookstore beginning a week before classes start and ending the same day as the drop period.

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 with the Dean's Office of students' college or school. A student seeking to withdraw should make an appointment with their Assistant Dean. New students who withdraw during their first semester at Alfred may apply their non-refundable acceptance deposit against any charges accrued for tuition, housing, or meals.

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 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 housing and meal 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 (607-871-2159) 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 Director of Alumni and Constituent Development.

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. All indoor and outdoor facilities are available for general student use outside of varsity athletic usage as well.

Indoor Facilities

McLane Center is the hub of athletic and recreational activities housing our six lane swimming pool (McLane Natatorium), the Gibbs Fitness Center (with over 60 pieces of equipment designed to promote cardiovascular fitness as well as strength training equipment), the Gene Castrovillo '75 Athletic Training Room, and the Mena '73 & Rick '75 Hansinger Family Physical Rehabilitation Center. McLane Center is also home to the Joyce & Walton Strength and Conditioning Center, which is restricted to student-athlete and athletic staff use, as well as Terry S. Galanis Family Arena, which is available for public use upon request.

The Joyce & Walton Family Center for Health & 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 for yoga and other group exercise.

The indoor surface in the annex is used by athletics, recreation, and large campus events.

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; Harrington Field for softball; four tennis courts and two pickleball courts; and Connors Family Pavilion.

The Bromeley-Daggett Equestrian Center at Maris Cuneo Equine Park, just minutes from campus, opened in Fall 2005 featuring indoor and outdoor arenas, 52 stalls, and classrooms.

Jericho Hill Fields, soon to be renovated as the future Saxon Hill Sports Complex, will be under construction form the summer of 2024 through early 2023. When completed, the Saxon Hills Sports Complex will feature a rugby field, 400-meter track, throws area, multi-purpose turf field, and a baseball field. The Complex will also feature a cross country running trail wich in the winter transitions to a cross country ski trail.

Intercollegiate Athletics

Alfred University sponsors intercollegiate athletics for women in alpine skiing, basketball, cheerleading, soccer, cross country, swimming & diving, tennis, track & field, lacrosse, softball, rugby and volleyball. Men’s intercollegiate sports include alpine skiing, baseball, football, cross country, track & field, basketball, rugby, soccer, lacrosse, swimming & diving, and tennis. Men’s rugby is a sponsored varsity sport. The dressage, hunt seat, and western equestrian teams are varsity and coeducational.

Alfred is a member of the National Collegiate Athletic Association (NCAA Division III), the Eastern College Athletic Conference and the highly competitive Empire 8 Conference, while skiing competes in United States Collegiate Ski and Snowboard Association (USCSA), Hunt Seat and Western Equestrian in the Intercollegiate Horse Show Association (IHSA) and Dressage Equestrian is in the Intercollegiate Dressage Association (IDA).

Intramurals/Club Sports

club Sports change year to year and are based on student interests. Past intramurals included: soccer, basketball, flag football and handball. The University also offers club sports such as baseball and E-Sports.

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 large open event space, student organization offices, a media hub, the bike hub (bike rentals), meeting rooms, an Alumni Lounge, mail room, gaming space, commuter lockers and student lounge. Resources found in Powell Campus Center are the Center for Student Involvement, Pamela Lavin Bernstein Center for Academic Success, Offices of Vice President of Student Experience and the Dean of Student Experience, the Institute for Cultural Unity and the University Barnes and Noble Bookstore.

Career Development Center

The CDC empowers students and alums to engage in professional development and find meaningful work through informed decision-making, practical experience, and connection to the global community. Our centralized career readiness resources are designed to:

- Prepare for post-graduation success by tapping into career-readiness resources from professional document review and interview preparation to graduate school planning.
- Discover internships, full- and part-time jobs, explore the Gibbs Online Career Resource Library, and access career assessments to discover your interests. All of this and more is available on Handshake, our on-campus job board and career center management tool.

- Connect with alumni and employers at on- and off-campus networking events, find a mentor, and build your professional network by engaging with industry experts and professionals in your desired field.
- Apply for up to $1,000 to engage in work experience and study/research opportunities. Juniors and seniors have an opportunity to apply for the Applied and Experiential Learning (APEX) Program.
- Enhance your professional brand. Visit Cheryl's Closet to find gently used professional clothing options to wear for interviews, networking events, conference attendance, and class presentations.

Conduct System

University students are expected to conform to high standards of behavior, both on and off campus. Student Policies and procedures 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 mission, 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 hold individuals accountable for 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 Experience 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 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. There are many more clubs than mentioned here and there are new clubs being formed each semester.

Contact the Center for Student Involvement at 607-871-2175 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 the student body and represents various constituencies on campus. 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 a large variety of entertainment programming: BINGO, magicians, musicians, laser tag and so much more.
- 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 – monthly publication/student newspaper (online)
- AUTV – student-produced video media content (online)
- 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 was designed and exists to promote a safe and healthy learning environment and resource center for all members of the Alfred University community.

As an integral part of the Alfred University support system, the Institute embraces, reinforces, and upholds an unwavering commitment to Access, Justice, Equity, Diversity and Inclusion which is central to Alfred University's Mission and Vision.

The Institute provides collaborative, preventative, and supportive resources and activities which facilitate dialogue, enhance understanding, and engender recognition of the unique and significant talents and capabilities of all those in the community, regardless of identification or classification.

As a student-led and student-focused resource center, the Institute actively works in engaging students in the creation and maintenance of a supportive and culturally competent and humble community built and sustained on the values of respect, communication, activism, advocacy, and global awareness. These values aid in the continued development of passionate and ethical leaders whose individual and communal growth are enhanced by experience, intercultural programs, and educational philosophies.

The governing body of the Institute for Cultural Unity is comprised of the following student organizations and their leaders:

- **African Student Association**
- **Poder LatinX** (AU’s Hispanic Culture and Heritage Organization)
- **The Alfred University Queer Art Collective** (AU’s LGBTQAI+ group designed higher sense of community amongst queer art students on AU campus)
- Umoja (AU’s Black Student Union)
- **Caribbean Student Association**
- **International Student Association** (AU's international and Global Awareness Organization)
- **Hillel** (AU Jewish Cultural and Religious Organization)
- **Sister Circle** (Women's alliance for minority groups whose mission is "To create a positive environment for all (minoritized) women through communication, volunteer work, and teaching. We will grow as leaders and set positive examples by uplifting one another and attending workshops.")
- **UNITED ALFRED** – AU’s LGBTQAI+ Group for all students

The Institute, as a whole, is known for the MLK Week Celebration and Dinner, Unity Day Celebration, Black History Month Film Festival and Heritage Month Celebrations.

Major Weekends and Events

- Homecoming Weekend – Highlighted by a Saxon football game and great entertainment
- Hot Dog Day – A well-established tradition, Hot Dog Day is a combination of street carnival and springfest; craft sale, parade, wiener dog races, 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
- FestiFall – Annual Fall festival with pumpkin carving, cider pressing, vendors, activities and more
- Large Act Concert – SAB’s annual gymnasium concert has included The Plain White T’s, Adam Sandler, Alanis Morissette, Bare Naked Ladies, Smashmouth, Vanessa Carlton, Black Eyed Peas, Gym Class Heroes, Everclear, OAR, The Wrecks and Fitz & The Tantrums.

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 their residence hall that promotes a healthy standard of community living.

For these reasons, provisions are made to house students on campus throughout their undergraduate years. Students are required to live on campus for a minimum of three years (six semesters). In order to be considered for a waiver to the housing policy after residing on campus for three years, students must have a minimum 3.0 cumulative grade point average, no active conduct disciplinary status, and have participated in a designated seminar to learn about what it means to be a responsible member of the larger community.

Students may be eligible for an off-campus release prior to completing the minimum three-year residency requirement if they meet one or more of the following criteria:

- Married, in a legal partnership
- Providing direct care for a legal dependent
- 23 years of age or older
- Honorably discharged veteran of the US Armed Forces: DD-214 must be provided as documentation
- Already possessing a baccalaureate degree from an accredited institution (reviewed for verification)
- Residing with a parent or court-appointed legal guardian at the person's permanent address who is commuting one-way fewer than:
    - 60 miles (enrolled prior to Spring 2023)
    - 30 miles (enrolled after Fall 2022)
- Completing an academic approved co-op, internship, or study abroad not within the respective mile travel distance from campus*
- Transfer students upon admission that show through documentation that they have resided on campus at another institution for 3 years and upon transfer have a minimum 3.0 cumulative grade point average at their prior institution

For more information about living in the hall, contact the Residential Communities office at 607-871-2186.

Housing Options

With a broad spectrum of living 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. All residence halls are coed either by floor or by room/suite/apartment (same gender in room). All residence halls are non-smoking.

Housing Staff

Residence hall staff members live in each building and on each floor or section. The Area Coordinator (AC) staff is responsible for the entire operation of the buildings with support from a Graduated Residence Director (GRD) . Each floor has a Resident Assistant (RA), an undergraduate student who has been trained in various aspects of student success.

The Director of Residential Communities, Associate Director, and Assistant Directors are also available to help students acclimate to their new social and educational environment. The Office of Residential Communities, located in Bartlett Hall, is an available resource for student concerns.

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 special interest houses and the Ford Street apartments. Our meal plan options are designed to give students maximum control of their meal management in relation to their lifestyle. Meal plans allow maximum flexibility by allowing a meal swipe to be used either at Ade Dining Hall (all you can eat) or Powell Cafe (a grab and go location) in using a meal swipe. Additional, a student has 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.
- Meal plans are for individual student use only and are non-transferable.

Dining Dollars only come with the purchase of a meal plan, additional Dining Dollars are not for sale. Fall semester dining dollar 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.

Ade Dining Hall offers multiple all you can eat stations and vegetarian choices at every meal. Powell Cafe located on the top floor of the Powell Campus Center, offer one combo meal in exchange for one meal swipe per meal period.

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 Alfy card website 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.

Student Life

The Division of Student Experience 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, student clubs and organizations offer a multitude of exciting activities for every interest. Concerts, arts, 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.

Opportunities in The Arts

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

Art

- Take a non-major studio art course
- Join one of the many art clubs
- Attend a reception at one of the six museums/galleries
- Join the monthly Art Walk
- Enjoy a summer workshop

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

Music

- Sing in the University Chorus or Encore Choir
- Play in the Symphony Orchestra, Symphonic Band, Jazz Band, Popular Music Ensemble and Sound Gathering Ensemble
- Form your own music groups, such as string quartets, brass ensembles and select vocal groups
- Learn to play the Chinese Guzheng, flute, guitar, piano or other instruments

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

Alfred University Family Association

Alfred University considers parents and family members to be valuable partners in student success. The Family Association (AUFA) is a way for parents/family to be informed and involved as partners in their student's education.

Membership in AUFA provides opportunities for parents/families to connect and engage with Alfred University while receiving information and opportunities to support their student's learning.

Parents and families are considered members of the Alfred University Family Association for free and will receive bimonthly e-newsletters and an invitation to an annual Family Association reception during Family Weekend. We want them to feel engaged in the AU community, connected to other AU family members and empowered to support their student's experience.

Email: families@alfred.edu

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 see 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 Experience 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. Counseling services are available in person and via telehealth. These are

completely confidential in accordance with standards set by the American Counseling Association.

The counseling staff members provide crisis response and can respond to mental health emergencies, during the semester. The Wellness Center offers all services at no cost to currently-enrolled undergraduate and graduate students. Appointments for psychiatric consultation, via telehealth, are available for a fee. Appointments for counseling or psychiatric consultation can be arranged by calling **607-871-2400** 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 607-871-2400.

Beth Robinson Judson Leadership Center

The Judson Leadership Center of Alfred University is the home to many of our leadership programs. It encompasses the Women's Leadership Center programs, such as the Women's Leadership Academy, the AKO Leadership Awards, and the Women of Influence Speaker Series. The Center also offers the LEAD Athletic Program for our student-athletes, the Emerging Leaders Program for first-year students, and houses our chapter of Omicron Delta Kappa Honor Society. The Women's Leadership Academy is a selective leadership development experience open to students of any gender identity that provides deep training and mentoring over the course of an academic year. Annual events include seminars, workshop series, guest speakers, and networking events with alumni.

Visit the Judson Leadership Center Website

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.

The Ombuds Officer provides resources for confidential complaint handling and neutral, informal conflict resolution to all Alfred University faculty, students, and employees. The Ombuds Officer aims to facilitate communication and collaborative dispute resolution, either by offering options for self-help or by mediating to resolve grievances. For more information, visit the Ombuds Officer website.

For general incident complaints, bias related incidents, student of concern incidents, COVID concerns or hazing incidents, please submit a report through AU Report It.

See the “Academics” section of this catalog 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 607-871-2975 or 703-859-1215 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 their 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 their tasks. A school official has legitimate educational interest if the official needs to review an education record in order to fulfill their 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 their 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 Experience 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 their inspection or (by waiving their 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), dates of attendance 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, 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

Follow the link for a complete list and descriptions of our academic regulations.

Alfred University Libraries

The librarians and staff are committed to supporting the University's educational mission and to promoting information literacy skills as well as a safe and welcoming environment. It is the Libraries' 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.

The Libraries' website provides round-the-clock access to the library catalog, electronic journals and books, specialized databases, video streaming, and other resources selected by our librarians to support student and faculty research. The website is a portal through which students can ask questions via email, chat or be connected to a librarian. Walk-in research questions are welcome at the service desks staffed by friendly and knowledgeable librarians, staff, and student workers.

The Personal Librarian Program connects all new students with their very own Personal Librarian to be their initial contact for all their research needs. In addition to assisting with research, Personal Librarians can help students navigate the Libraries' resources, answer questions about the libraries, and connect students with the right people on campus for other forms of support.

The Alfred Libraries also provide interlibrary loan and document delivery services, which provide access to materials from other libraries. Through our association with SUNY, both Alfred University Libraries are a part of the network of SUNY libraries across the state to form a single multi-campus "virtual library," greatly expanding access to print and electronic resources for all Alfred University students.

Herrick Memorial Library

Herrick Memorial Library is committed to providing curriculum-centered collections, personal service, and multi-functional spaces that support the learning and instructional needs of our campus community. 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 recreation or discussion in the BookEnd Lounge, where new journals, books, and newspapers can be enjoyed with a cup of coffee. During the academic year the library is open over 100 hours a week, with extended hours during final exam week. Also located within Herrick Library are the offices of the Center for Academic Success (CAS) and the Information Technology Services (ITS) HelpDesk.

Collections

Herrick provides access to over 100,000 periodical titles and over 500,000 e-books as well as an extensive print book collection. Its collection also contains recreational collections of books and movies. Some highlights include the Openhym collection of 10,000 items related to British history, culture, and literature, the Confucius Institute Collection, Juvenile Collection, and the McNaughton Collection of current bestsellers.

Study Spaces

Wireless access is available throughout the building.

- An all-night study room is available for use after the library closes, providing study space and a computer lab 24/7.
- Group study rooms and individual workspaces are also available, accommodating a wide variety of study preferences.
- Saxon Station is a great collaborative or solo workspace with a PC and booth-style seating with large tables.

Classroom and Presentation Spaces

- Computer lab equipped for hybrid instruction, creative collaboration or for classwork.
- Seminar room, which is excellent for meetings or film screenings.

University Archives

Special Collections and the University Archives offer collections and services in a secure, climate-controlled environment. The area features an ornately decorated conference room with historic 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. During the academic year the library is open approximately 100 hours per week, with extended hours during final exam week. In addition to providing reference assistance, 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 and support to students, faculty, and community researchers.

Collections

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. Scholes' 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.

Study and Group Spaces

There are computer workstations throughout the building including computers with specialized engineering and design software. Wireless access is available throughout the building.

- Multiple study rooms for individual or small group use, some of which can be reserved.
- A large group study room which can be reserved by students for group study sessions.
- Graduate carrels and faculty studies.

Classroom/Presentation Spaces

- Two classroom spaces equipped for hybrid instruction with the ability to share slides and audio in-person and via videoconferencing.
- Computer lab for instruction, creative collaboration, or for classwork utilizing the Adobe Suite software.
- Seminar room, which is excellent for meetings or film screenings.

Archives and Special Collections

The College Archives preserve historical documents and photographs relating to the history of the College. 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. The Archives are accessible to student and faculty researchers by appointment with the archives staff who are happy to support their research.

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 Special Collections are accessible to student and faculty researchers by appointment, or on a walk-in basis when a librarian is on duty.

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 provides a gigabit campus network that is interconnected via a 10 gigabit per second campus backbone which services every residence hall room, classroom, and office on campus. Connectivity to the Internet is provided via redundant 10 gigabit per second WAN connections to multiple providers to ensure performance as well as reliability. 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 preconfigured with Microsoft Office 365, standard Internet browsers, and enterprise level antivirus software. Specialized software such as SPSS, Maple, MatLab, SolidWorks, ArcGis, Minitab and others are available in all computer labs, 24-hour spaces, and library computers. Adobe Creative Cloud is available in select labs located in the Scholes and Herrick Libraries. 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, Panopto, 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. Panopto provides lecture capture and video management services. It allows instructors to record or upload videos so students may stream them on their computers or mobile devices. 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. 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 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 one hour 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 at no additional cost. For courses not specifically supported through tutoring, students can seek help from CAS's Study Buddies. These are general area tutors who can also help students utilize their resources to build strong academic skills (study habits, time management, note-taking, using campus resources, etc.).

Writing Center

The Writing Center provides free writing and oral communication assistance to all Alfred University students, faculty, and staff. Student consultants represent a wide range of academic disciplines and are trained to deal with all kinds of writing and speaking tasks. Consultants can assist with discovering ideas, organizing information,

strengthening arguments, and revising written work, presentations, visual aids and technical documents.

Disability Services

CAS coordinates academic and housing 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 and explains how the disability impacts the student.

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 4-5-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 - Registrar's office
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 The Food Lab, Monsters, DO NOT PASS GO: What We Can Learn from Board Games, Drinking Up: The History and Science of Alcohol, From the Clash to Kendrick: The Art of Protest Music, Corporate Scandals and Business's Dark Side, and CAMP!

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 all students to consider studying abroad! We have programs available on 6 continents and in different formats so you can tailor the experience to your interests. To look through the available options, check out our program search. More information on the different types of programs and how financial aid can apply is also found on our website.

Planning your Study Abroad

Students of all majors are eligible to go abroad for up to a full calendar year. This can be through a full year program, two semester length programs or several shorter study abroad experiences.

It's never too early to start planning! We recommend the following steps to success:

1. Start the conversation early with both your academic advisor and the Education Abroad office. We generally say that you should reach out to the Education Abroad office (studyabroad@alfred.edu) about a year before you actually want to leave.
2. Note the application deadlines – the priority deadline to complete a study abroad application is September 1st for Winter and Spring programs, February 1st for Summer and Fall 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 of our programs offer classes in English), knowing a second language opens up your options.

Study Abroad Academic Policies

Courses and Course Load

- Students must obtain prior approval for the courses and credits taken on study abroad. Once all the 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 with the equivalent of a C or above.
- 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 Education Abroad office 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.)
- The study abroad 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. It's 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.

University-Wide General Education Goals

University-wide education goals are met through a network of curricula that embrace our mission and values while preserving the distinctiveness of each academic unit.

Graduates of Alfred University will:

- Demonstrate expanded cultural and global awareness and cultural sensitivity
- Recognize values, ethics, and diverse perspectives
- Integrate knowledges critically and analytically
- Communicate proficiently in writing, and orally
- Demonstrate scientific and quantitative reasoning
- Describe and explain the interconnections among physical fitness, healthy lifestyle decisions, and well-being across the lifespan
- The College of Liberal Arts and Sciences/Performing Arts Division's 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 First Year Foundations of Art & Design curriculum that cultivates art & design practice and research

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

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, in effect at the time of admission or most recent readmission. **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
African American Studies	4 or 5	4	HIST 200
Art History	4 or 5	4	ARTH 130 and ARTH 140 (Area C)
Biology	4 or 5	8	BIOL 101/102 (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

AP Examination	Credit-Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
Chemistry	4	4	CHEM 105 and CHEM 105L (Area F-I)
	5	8	CHEM 105 and 105L and CHEM 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 100 (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)

AP Examination	Credit-Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
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)
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)
Research	4 or 5	4	Specific to subject; (Ex: HIST 100)
Seminar	4 or 5	4	COMM 100
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 220

CLEP Examination	Credit-Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
Analyzing & Interpreting Literature	50*	4	General Elective
College Composition Modular	50*	4	ENGL 101
English Literature	50*	4	ENGL 220
English Composition	n/a	none	none
Humanities	n/a	none	none
* Credit is granted only with an acceptable locally-graded essay			
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)
Chemistry	65+	8	CHEM 105, 106
Calculus with Elementary Functions	50	3	MATH 151 (03-QR)
Trigonometry	50	3	General Elective
College Mathematics	50	4	MATH 101 (03-QR)
Pre Calculus	50	4	MATH 100
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)

CLEP Examination	Credit-Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
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)
Principles of Marketing	50	4	MTKG 221
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. Check the university webpages for the most up to date exams.

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)
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 100 (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):	6-7	8	ENGL 101, 102 (01)

IB Examination (level)	Credit Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
Language and Literature (HL)			
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	8	BIOL 101/102 (Area F-I)
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)

IB Examination (level)	Credit Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
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)
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

All Alfred University undergraduate students must satisfy the Global Perspective Requirement in order to receive a Bachelor's degree.

The Global Perspective Requirement may be satisfied by:

1. Taking an approved Global Perspective (GP) course or approved GP special topics 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 (usually the case for international students)

Courses carrying the GP attribute must:

- Have an international or cross-cultural, non-US focus
- Deal substantially with contemporary or 20th century subjects and
- Foster increased understanding of groups, nations, traditions, environments or artistic, technical or scientific developments abroad

Common Global Perspective Disciplines

The following disciplines commonly offer courses which satisfy the Global Perspective Requirement:

- Anthropology
- Art History
- Business
- Communication Studies
- Economics
- English
- Environmental Studies
- Equestrian Studies
- Finance
- French
- German
- Global Studies
- History
- Marketing
- Music
- Political Science
- Religious Studies
- Social Justice Studies
- Sociology
- Spanish
- Women's and Gender Studies

GP Course Availability

For a list of GP courses and GP special topics courses for an upcoming semester, please check the Class Schedule on AU BannerWeb. After picking a semester, search for GP classes by using the Degree Requirement: (Attribute) box on the left of the screen, and highlighting AU: Global Perspective tab, then clicking Class Search.

Instructors may petition the Global Perspectives Committee to have their courses carry the GP attribute. For more information, please email Global Perspective Committee Chair Andrew Kless.

Double Major

A double major refers to in-depth study in a second disciplinary major. Double majors are not linked to degree programs, and as such are available to students within and outside the academic unit offering the double major. Any Alfred University student may complete the requirements for a second academic major or field of study at the same time that they are working on a primary degree program. Students who complete a double major receive one degree listing their primary major and program, while acknowledgement of the second major appears on their transcript.

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 education 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 20 credit hours in a semester.

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. In some instances Dean approval may be needed. See our website for Academic Regulations.

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.

Priority Registration for Gi-Bill Benefits

Priority registration helps ensure that Student Veterans can graduate before their educational benefits run out. This would extend to all those who receive Gi-Bill benefits, to be a “Qualified student” means a student who: (A) Is an active member of the Armed Forces of the United States or served in the Armed Forces of the United States; (B) If a former member of the Armed Forces of the United States, was relieved or discharged from that service with either an honorable discharge or a general discharge under honorable conditions; or (C) Is a student who receives veterans’ educational benefits as a federally qualified dependent.

600 Leave of Absence/Withdrawal and Readmission

601 Withdrawal from the University

A student who chooses to withdraw from the University must meet with the Assistant Dean of their college or school. The Assistant Dean will explain the official process and advise the student on next steps. (See 604 for withdrawal grade policy.)

602 Readmission

602.1
A student who has withdrawn from the University or been suspended or dismissed for any reason may be granted the opportunity to return. Application for readmission must be submitted to the Office of Admission by July 1 for fall semester readmission or by November 1 for spring semester readmission.

602.2
A readmitted student must complete the degree requirements of the University catalog in effect at the time of their readmission. If the student chooses and/or their advisor recommends, the student may complete requirements of a later catalog.

603 Undergraduate Leave of Absence

Some students may need to temporarily pause their education. The University has established a leave of absence policy that assures a student the right to continue their education following a specified leave period, usually one to two semesters. A leave of absence request must include the reason(s) for the leave and the length of time the student plans to be away.

1. Personal Leave of Absence

• A student must meet with their Assistant Dean to request a leave of absence.
• Before granting a personal leave of absence, the Assistant Dean will counsel the student about the leave and return process.
• Once a leave of absence is granted, the Dean's office will notify relevant University officials of the decision and the expected date of return.

2. Medical Leave of Absence:

• A student seeking a medical leave of absence should contact the Dean for Student Experience.
• A student who is granted a leave of absence to deal with physical or mental health concerns must submit a clinical evaluation to the Student Experience Office and be approved to return from leave by the Dean of Student Experience.

A student living on campus at the time of their leave of absence will need to contact the Office of Residence Life regarding their room and belongings. Students should also communicate with the Student Accounts Office and Financial Aid if they have questions regarding their account.

Students on judicial probation will normally not be granted a leave of absence. Under certain circumstances (for example, a felony conviction) under which a student's leave of absence, and eligibility to return to the University, may be canceled.

604 Grades for Students leaving School During the Semester

A student who formally withdraws from the University during a semester will be given W grades in those courses in which they are registered, providing the published last date to withdraw from each course has not passed. When the last day to withdraw has passed, the instructor will record a final (non-W) letter grade. In case of special circumstances, the student's Dean may permit W grades to be recorded for any courses after the deadline has passed.

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 an electronic form. For more information, contact the Student Service Center-Registrar's office 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)

Incomplete Grade

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. Extension can be granted for one additional semester. Any extensions beyond the one additional semester (1 year total) must be approved by the Registrar's office by supplying documentation that the student has been in contact with the instructor and is making progress towards completion.

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.

Grade of "In Progress" (IP)

The grade of IP (In Progress) may be given for thesis and seminar or project courses when the course extends by design over multiple terms. The IP indicates that the course remains in progress and that a grade will be given in the future. IP grades will remain for no longer than 2 years, at which time the grade will change to an “F” or “NC”, unless an additional semester extension is approved by approved by the Registrar’s office by supplying documentation that the student has been in contact with the instructor and is making progress towards completion.

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; courses from non-accredited institutions or businesses, like Straighterline; 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 90, to include credit from other

institutions, credit as recommended by the American Council on Education, and credit from standardized exams (see below). The 90-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 Military Affairs 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, and a Student Experience representative. The Registrar provides data for committees but is not a standing member. 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

Dean's List

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 their 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 complete and successfully defend an Honors Thesis project, and are deemed to be of good character will 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
- dual 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
- Chi Sigma Alpha - Student Affairs
- Chi Sigma Iota - Counseling
- Delta Mu Delta – Business Admin.
- Financial Management Association
- 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 Mu Epsilon - Mathematics
- Pi Sigma Alpha – Political Science
- Psi Chi – Psychology
- Sigma Tau Delta - English
- Tau Beta Pi – Engineering

700 Academic Dishonesty (Unethical Practices)

Alfred University Code of Honor

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.

Alfred University values integrity of all types - scholarly (research), personal and academic. As a result, the Faculty at Alfred University have set high standards for particularly academic integrity and severe penalties for deviations, broadly called academic dishonesty, from these standards.

701 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.

- 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.
- 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.
- 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.
- 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.
- 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, overbalance on lengthy quotations can be considered a form of plagiarism.
- 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.

702 Procedures

702.1 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 their department chair or, if that department chair is deemed

inappropriate or impractical, another colleague or administrator, review the alleged infraction.

- Within seven business 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 section 702.0.e), a copy of the letter along with documentation fo the infraction 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 in the event of an appeal.
- The penalty within a course for academic dishonesty is entirely at the instructor’s discretion for both Tier One and Tier Two offenses
- 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, they 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.

702.2 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) business days after the instructor sends email and written notification of the offense and penalty to the

student. The fourteen business 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. The Ombuds Officer informs the student if the matter has been resolved within seven business days.
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 their 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) business 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 fourteen (14) business days. Membership of the appeals committee shall include one student, to come from the University Student Grievance Committee, and any 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 (7) business days once the appeal committee has come to a recommendation. The appeals committee shall be limited to assessing whether the faculty member has proceeded in a manner consistent with the procedures specified in Section 700 and/or whether the offense constitutes academic dishonesty.
7. The instructor, the appropriate departmental/divisional head (if they are not a party to the case), and the instructor's dean (if they are 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. If the instructor does not accept the recommendation of the committee, the provost makes the final decision regarding written records.

702.3 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) business 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.

702.4 Notification

Regarding all cases that fall under the purview of section 702.3, 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.

702.5 Records

All reports and documents pertaining to each case, including faculty charges, student appeals, appeal-committee records, and all written responses will be filed within the Provost's office."

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 2017, there were 464 full-time, first-time degree-seeking, undergraduate students enrolled at AU. As of June 31, 2023, the percentage rate of those Fall 2017 students who graduated from Alfred University are listed below:

After 4 years 206 graduated (43%)

After 5 years 206 graduated (43%)

After 6 years 265 of these students (56%)

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+

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 221 Psychological Research Methods and Statistics I - 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
- PHYS 112 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 105L General Chemistry I Laboratory - 1 Credit
- CHEM 106 General Chemistry II - 3 Credits
- CHEM 106L General Chemistry II Laboratory - 1 Credit
- CHEM 315 Organic Chemistry I - 3 Credits
- CHEM 315L Laboratory-Organic Chem I - 1 Credit
- CHEM 316 Organic Chemistry II - 3 Credits
- CHEM 316L Laboratory-Organic Chem II - 1 Credit

Total Credit Hours 44

School of Art & Design

The New York State College of Ceramics

In the School of Art & Design, we seek to inspire the creative spirit and sustain a love of learning and innovating. We offer students an intensive exploration across a breadth of media and within a depth of discipline that allows the undergraduate student to prepare to be an artist or designer, begin a career in the arts, or to continue their studies in graduate school. Students gain skills and competencies including team-based learning, technology, communication, aesthetic judgment, interdisciplinary and innovative approaches, critical analysis, and professional development throughout their program of study. The B.F.A. senior thesis exhibition, a highlight of the undergraduate career, both demonstrates and celebrates the students' accomplishments.

The School of Art & Design offers three undergraduate Degree Programs:

- The Bachelor of Fine Arts (BFA)
- The Bachelor of Science in Art History and Theory (BS)
- The Bachelor of Fine Arts with Visual Arts Education Minor (BFA)

Bachelor of Fine Arts (BFA)

The BFA degree provides opportunities for undergraduate students to study ceramic art, drawing, painting, photography, design, print media, video, sonic art, interactive media, foundry, fabrication, fibers, neon, mixed media, 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.

Student Learning Outcomes:

Content Knowledge

1. Apply the principles and practices/skills of a professional artist/designer.
2. Understand the world through study of international historic and contemporary art.

Critical Thinking

1. Integrate knowledge critically and analytically.
2. Observe, analyze, and explain motivation for and intent of an individual's work.

Communication

1. Communicating proficiently in writing, and orally.

2. Create a professional portfolio.

BFA Degree Requirements

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

Art Studio - 72 Credits
Art History - 17 Credits
Academic Requirement - 25 Credits
Electives - 14 Credits
BFA Exhibition - 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** requirements

Studio Material Fees

Most courses in the School of Art & Design have studio material fees associated. Please see BannerWeb for current fees.

Non-Majors Art Courses

The following courses are non-major courses and cannot be taken by School of Art & Design students. These courses are for non-SOAD major students only.

- Art 111 - Drawing for Non-Art Majors (4 credit hours)
- ART 121 - Glass Studio for Non-Majors (4 credit hours)
- ART 133 - Photography for Non-Majors (4 credit hours)
- ART 151 - Ceramics for Non-Majors (4 credit hours)
- ART 161 - Printmaking for Non-Majors (4 credit hours)

Incoming Credits

School of Art & Design accepts all incoming transfer credit; AP (score of 4 or higher), IB, and dual enrollment transfer credit (letter grade of C or higher). All core art studio and art history courses must be completed in residence as a matriculated student at AU. *Dean's office to review any exceptions.

Studio and Art History - 89 Credits (72cr. Studio/ 17cr. ARTH)

First-Year

STUDIO (16cr.)
(course range ART 101-106)
Foundations at Alfred is an intensive first-year immersive series of courses which equip students with a foundational understanding and beginning command of the elements and principles of art and design. 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 first-year studio courses, students are encouraged to broaden their visions and find linkages between the methods, material, and content. Students complete 16 credits of studio by taking each of the following courses over the first year:
Fall Semester:
ART 101 - Foundations I: Looking to Understand (4 credit hours)
ART 102 - Foundations II: Drawing Permutations (4 credit hours)
Spring Semester:
ART 103 - Foundations III: Color (2 credit hours)
ART 104 - Foundations IV: Form & Fabrication (2 credit hours)
ART 105 - Foundations V: Image (2 credit hours)
ART 106 - Foundations VI: Time & Space (2 credit hours)
Students are not allowed to take any other studio courses, other than the above courses.

ART HISTORY(6cr.)

Students complete 6 credits of art history by taking three (half semester) 2 credit courses. One from each of the following areas:
Non-Western Art (ARTH 120-129)
Ancient to Baroque Art (ARTH 130-139)
Modern to Contemporary Art (ARTH 140-149)

ART ELECTIVES

First-year students are NOT permitted to take professional practice or technical ART courses but are permitted to take ART internship courses:
ART 289 - Robert C. Turner Gallery Internship
ART 385 - Internship

Sophomore Year

STUDIO (16cr.)

(course range ART 201-262)
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 across the school. Students will gain awareness and ability to understand, use and integrate processes, tools, materials, and vocabularies. Through inquiry-based research and synthesis, each student learns strategies to realize their ideas through art practice, research and reflection.

If any first-year studio courses are unsatisfactory, students will need permission from the Assistant Dean of the School of Art & Design to continue into sophomore studios. Sophomore studios are reserved for School of Art & Design sophomore students. Students that have a studio standing of first-year, junior, or senior are not permitted to register for sophomore studios unless permission is granted from the Assistant Dean. Sophomore students complete 16 credits of studio by taking four of the following courses (2 per semester) during their sophomore year:
Ceramic Art:
ART 201 - Introduction to Handbuilding (4 credit hours)
ART 203 - Introduction to Wheel (4 credit hours)
Expanded Media:
ART 212 - Introduction to Design Studio: Type and Image (4 credit hours)
ART 213 - Introduction to Integrative Graphic Design (4 credit hours)
ART 214 - Introduction to Speculative Illustration + Design (4 credit hours)
ART 218 - Introduction to Photography (4 credit hours)
ART 225 - Introduction to Print Media (4 credit hours)
ART 232 - Introduction to Video + Sonic Arts (4 credit hours)
Drawing + Painting:
ART 246 - Introduction to Painting (4 credit hours)
Sculpture Dimensional Studies:
ART 255 - Introduction to Sculpture (4 credit hours)
ART 262 - Introduction to Glass (4 credit hours)
Sophomore studio courses cannot be repeated for credit.

Students are not allowed to take more than 2 studio (ART 201-262) courses per semester.
ART HISTORY (3-7cr.)
The sophomore art history requirement provides a stimulating and integrated context to the studio experience.

Students complete 3 credits of art history by taking the following course during the fall semester. This course is not offered in the spring semester:

- ARTH 211 - Art in Our Time (3 credit hours)

In the spring semester sophomore students are encouraged to take one of the required upper-level courses - ARTH 300-399.

Junior Year

STUDIO (16cr.)

(course range ART 300-378)
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.
The junior year is also the time for students to take advantage of study abroad opportunities. For more information visit the Study Abroad Office.
If any sophomore studio courses are unsatisfactory, students will need permission from the Assistant Dean of the School of Art & Design to continue into junior studios.
Junior studios are reserved for School of Art & Design junior students. Students that have a studio standing of first-year, sophomore, or senior are not permitted to register for junior studios unless permission is granted from the Assistant Dean.
Junior students complete 16 credits of studio by taking four of the following courses (2 per semester) during their junior year:
Ceramic Art:
- ART 300 - Topics (4 credit hours)
- ART 301 - Ceramic Sculpture I (4 credit hours)
- ART 302 - Ceramic Sculpture II (4 credit hours)
- ART 302 - Ceramic Tile (4 credit hours)
- ART 304 - The Figure in Ceramic Sculpture (4 credit hours)
- ART 305 - Ceramic Pottery I (4 credit hours)
- ART 306 - Ceramic Pottery II (4 credit hours)
- ART 307 - Design Space! Ceramics (4 credit hours)
- ART 309 - Ceramic Systems II (4 credit hours)
- ART 310 - Ceramics: Hybrid Vessell II (4 credit hours)

Expanded Media:
- ART 312 - Expressive Typography (4 credit hours)
- ART 314 - Junior Design Studio: The Graphic Impulse (4 credit hours)
- ART 316 - Design and Marketing (4 credit hours)
- ART 321 - View Camera (4 credit hours)
- ART 322 - Advanced Digital Photography (4 credit hours)
- ART 324 - Contemporary Photographic Practice (4 credit hours)
- ART 325 - Advanced Print Media (4 credit hours)
- ART 328 - Artist Multiples (4 credit hours)
- ART 329 - Digital Print Media (4 credit hours)
- ART 331 - The Photo Book (4 credit hours)
- ART 332 - Advanced Video Arts (4 credit hours)
- ART 336 - Generative and Interactive Animation (4 credit hours)
- ART 339 - Sonic Art (4 credit hours)

Drawing + Painting:
- ART 346 - Junior Painting (4 credit hours)
- ART 348 - Junior-Mixing Materials (4 credit hours)
- ART 349 - Water-Based Media (4 credit hours)

Sculpture Dimensional Studies:
- ART 355 - Sculpture Foundry: From Miniature to Monumental (4 credit hours)
- ART 361 - Glass Blowing (4 credit hours)
- ART 362 - Advanced Glass Blowing (4 credit hours)
- ART 363 - Glass and Light (4 credit hours)
- ART 364 - Glass Casting (4 credit hours)
- ART 368 - Light and Mixed Media (4 credit hours)
- ART 373 - Material Poetics in Dimensional Studies (4 credit hours)

ART 378 - Art and Ecology (4 credit hours)

Junior studio courses cannot be repeated for credit, unless specified as repeatable in their course description.
Students are not allowed to take more than 2 studio (ART 300-378) courses per semester.

ART HISTORY (4-8cr.)

If students did not take a required upper-level ARTH course during their sophomore year they will have an opportunity to take both in their junior year by taking one during each semester.
Students complete 4-8 credits of art history by taking one or two of the required upper-level courses - ARTH 300-399
If students have successfully taken one 300 level ARTH, they can receive permission to take one 400 level with permission from instructor.

Senior Year

STUDIO (16-24cr.)

(course range ART 401)
Seniors work semi-independently in their own studio spaces and are required to meet weekly with two faculty instructors (per semester) 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.
If any junior courses are unsatisfactory, students will need permission from the Assistant Dean of the School of Art & Design to continue into senior studios.
Senior studios are reserved for School of Art & Design senior students. Students that have a studio standing of first-year, sophomore, or junior are not permitted to register for senior studios unless permission is granted from the Assistant Dean.
Senior students complete 16-24 credits of studio by taking four sections of the following course (2 per semester) during their senior year:

- ART 401 - Senior Studio (4-6 credit hours)

Credits during the senior year are variable to allow for completion of the total studio credits (72cr.) required.
Students are not allowed to take more than 2 studio (ART 401) courses per semester.

SENIOR SHOW (0cr.)

The culmination of the BFA degree is the senior exhibition that happens in the final semester of senior year. During the final two weeks of the academic year, the School of Art and Design is transformed into an exhibition space where graduating seniors display their final work.
In the final senior semester students are required to register for the following course:

- ART 499 - Senior Show (0 credit hours)

Registration in this course and participation in the senior show is only permitted to those students who have successfully completed and satisfied all studio and art history credits/requirements.

ART HISTORY
If students have not completed the requirements for art history prior to senior year, they must complete those requirements during their senior year.

Drawing Requirement - 4 Credits

Students are required to take one 4-credit drawing course designed for the major:

- ART 282 - Figure Drawing (4 credit hours)
- ART 283 - Drawing: Observation to Abstraction (4 credit hours)
- ART 284 - Drawing: Analyzing Nature (4 credit hours)
- ART 285 - Digital Drawing (4 credit hours)

It is recommended that this requirement be fulfilled in the sophomore or junior year. First-year students are NOT permitted to take these drawing courses.

Academic Requirement - 25 Credits

Academic Requirement (25cr.)
This requirement is met by completing each of the following areas:
Writing Requirement (4cr.)
Each student must complete one of the following courses:

- ENGL 101 - Writing I (4 credit hours)
- ENGL 102 - Writing II (4 credit hours)

Students will be placed in the appropriate level course depending upon their SAT or ACT scores. Students without test scores will be placed in ENGL 101.

It is recommended that students complete this requirement by the end of the first year.

Humanities Requirement (8cr.)
Each student must complete two - 4cr. courses that bare the attribute of School of Art & Design (SOAD) humanities.

One 4cr. course must be taken from the area of 'SOAD: Humanities-Area B or D' attribute

- Area B - Philosophy or Religious Studies
- Area D - Historical Studies

The second 4cr. course may be taken from either the 'SOAD: Humanities-Area B or D' or from the area of 'SOAD: Humanities-'Other' attribute.
It is recommended that students complete at least one- 4cr. course by the end of the first year and the second- 4cr. course by the end of the second year.

University Requirement (1cr.)
Each student must complete the following course:

- UNIV 101 - Common Ground (1cr.)

This course is only offered in the spring semester and should be taken during the first year.
Additional Academic credits (12cr.)
Each student must complete 12 credits of additional academics that can be made up of courses from the following areas:

- All courses offered by the College of Liberal Arts and Sciences
- All courses offered by the College of Business
- All courses offered by the Inamori School of Engineering
- All courses offered by the Division of Performing Arts (except for private music lesson courses: MUSC 101-108 or 301-308)
- Art History courses beyond the required 17 credit hours
- Honors Seminars (HONR 101-480)
- Military Science Courses (101-450)
- University Courses (UNIV 102-450)
- Wellness Courses (WELL 100-101)
- Off Campus Courses (OCST 301 and 325)

Electives - 14 Credits

Students are required to complete **14 credit hours of electives**.
Elective courses can be any course except for Physical Fitness courses (PFIT 100-133).

BFA Degree with Visual Arts Education

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

*The Visual Arts 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 - 30 Credits
Common Ground - 1 Credit
BFA Exhibition - 0 Credit

Total credit hours - 135

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

Studio Material Fees

Most courses in the School of Art & Design have studio material fees associated. Please see BannerWeb for current fees.

Non-Majors Art Courses

The following courses are non-major courses and cannot be taken by School of Art & Design students. These courses are for non-SOAD major students only.

- Art 111 - Drawing for Non-Art Majors (4 credit hours)
- ART 121 - Glass Studio for Non-Majors (4 credit hours)
- ART 133 - Photography for Non-Majors (4 credit hours)
- ART 151 - Ceramics for Non-Majors (4 credit hours)
- ART 161 - Printmaking for Non-Majors (4 credit hours)

Studio and Art History - 85 Credits (68cr. Studio / 17cr. ARTH)

First-Year

STUDIO (16cr.)

(course range ART 101-106)

Foundations at Alfred is an intensive first-year immersive series of courses which equip students with a foundational understanding and beginning command of the elements and principles of art and design. 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 first-year studio courses, students are encouraged to broaden their visions and find linkages between the methods, material, and content.
Students complete 16 credits of studio by taking each of the following courses over the first year:

- Fall Semester:
  ART 101 - Foundations I: Looking to Understand (4 credit hours)
  ART 102 - Foundations II: Drawing Permutations (4 credit hours)
- Spring Semester:
  ART 103 - Foundations III: Color (2 credit hours)

ART 104 - Foundations IV: Form & Fabrication (2 credit hours)
ART 105 - Foundations V: Image (2 credit hours)
ART 106 - Foundations VI: Time & Space (2 credit hours)

Students are not allowed to take any other studio courses, other than the above courses.

ART HISTORY(6cr.)

Students complete 6 credits of art history by taking three (half semester) 2 credit courses. One from each of the following areas:

- Non-Western Art (ARTH 120-129)
- Ancient to Baroque Art (ARTH 130-139)
- Modern to Contemporary Art (ARTH 140-149)

ART ELECTIVES

First-year students are NOT permitted to take professional practice or technical ART courses but are permitted to take ART internship courses:

- ART 289 - Robert C. Turner Gallery Internship
- ART 385 - Internship

Sophomore Year

STUDIO (16cr.)

(course range ART 201-262)
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 across the School. Students will gain awareness and ability to understand, use and integrate processes, tools, materials, and vocabularies. Through inquiry-based research and synthesis, each student learns strategies to realize their ideas through art practice, research and reflection.

If any first year studio courses are unsatisfactory, students will need permission from the Assistant Dean of the School of Art & Design to continue into sophomore studios. Sophomore studios are reserved for School of Art & Design sophomore students. Students that have a studio standing of first-year, junior, or senior are not permitted to register for sophomore studios unless permission is granted from the Assistant Dean. Sophomore students complete 16 credits of studio by taking four of the following courses (2 per semester) during their sophomore year:
Ceramic Art:
ART 201 - Introduction to Handbuilding (4 credit hours)
ART 203 - Introduction to Wheel (4 credit hours)
Expanded Media:
ART 212 - Introduction to Design Studio: Type and Image (4 credit hours)
ART 213 - Introduction to Integrative Graphic Design (4 credit hours)

ART 225 - Introduction to Print Media (4 credit hours)
ART 232 - Introduction to Video + Sonic Arts (4 credit hours)

Drawing + Painting:

ART 246 - Introduction to Painting (4 credit hours)

Sculpture Dimensional Studies:

ART 255 - Introduction to Sculpture (4 credit hours)
ART 262 - Introduction to Glass (4 credit hours)

Sophomore studio courses cannot be repeated for credit.

Students are not allowed to take more than 2 studio (ART 201-262) courses per semester.

ART HISTORY (3-7cr.)

The sophomore art history requirement provides a stimulating and integrated context to the studio experience.

Students complete 3 credits of art history by taking the following course during the fall semester. This course is not offered in the spring semester:

- ARTH 211 - Art in Our Time (3 credit hours)

In the spring semester sophomore students are encouraged to take one of the required upper-level courses - ARTH 300-399.

Junior Year

STUDIO (16cr.)

(course range ART 300-378)

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.

The junior year is also the time for students to take advantage of study abroad opportunities. For more information visit the Study Abroad Office.

If any sophomore studio courses are unsatisfactory, students will need permission from the Assistant Dean of the School of Art & Design to continue into junior studios.

Junior studios are reserved for School of Art & Design junior students. Students that have a studio standing of first-year, sophomore, or senior are not permitted to register for junior studios unless permission is granted from the Assistant Dean.

Junior students complete 16 credits of studio by taking four of the following courses (2 per semester) during their junior year:

Ceramic Art:

ART 300 - Topics (4 credit hours)
ART 301 - Ceramic Sculpture I (4 credit hours)
ART 302 - Ceramic Sculpture II (4 credit hours)
ART 302 - Ceramic Tile (4 credit hours)
ART 304 - The Figure in Ceramic Sculpture (4 credit hours)
ART 305 - Ceramic Pottery I (4 credit hours)
ART 306 - Ceramic Pottery II (4 credit hours)
ART 307 - Design Space! Ceramics (4 credit hours)

ART 309 - Ceramic Systems II (4 credit hours)
ART 310 - Ceramics: Hybrid Vessell II (4 credit hours)

Expanded Media:

ART 312 - Expressive Typography (4 credit hours)
ART 314 - Junior Design Studio: The Graphic Impulse (4 credit hours)
ART 316 - Design and Marketing (4 credit hours)
ART 321 - View Camera (4 credit hours)
ART 322 - Advanced Digital Photography (4 credit hours)
ART 324 - Contemporary Photographic Practice (4 credit hours)
ART 325 - Advanced Print Media (4 credit hours)
ART 328 - Artist Multiples (4 credit hours)
ART 329 - Digital Print Media (4 credit hours)
ART 331 - The Photo Book (4 credit hours)
ART 332 - Advanced Video Arts (4 credit hours)
ART 336 - Generative and Interactive Animation (4 credit hours)
ART 339 - Sonic Art (4 credit hours)

Drawing + Painting:

ART 346 - Junior Painting (4 credit hours)
ART 348 - Junior-Mixing Materials (4 credit hours)
ART 349 - Water-Based Media (4 credit hours)

Sculpture Dimensional Studies:

ART 355 - Sculpture Foundry: From Miniature to Monumental (4 credit hours)
ART 361 - Glass Blowing (4 credit hours)
ART 362 - Advanced Glass Blowing (4 credit hours)
ART 363 - Glass and Light (4 credit hours)
ART 364 - Glass Casting (4 credit hours)
ART 368 - Light and Mixed Media (4 credit hours)
ART 373 - Material Poetics in Dimensional Studies (4 credit hours)
ART 378 - Art and Ecology (4 credit hours)

Junior studio courses cannot be repeated for credit, unless specified as repeatable in their course description.

Students are not allowed to take more than 2 studio (ART 300-378) courses per semester.

ART HISTORY (4-8cr.)

If students did not take a required upper-level ARTH course during their sophomore year they will have an opportunity to take both in their junior year by taking one during each semester.

Students complete 4-8 credits of art history by taking one or two of the required upper-level courses - ARTH 300-399

If students have successfully taken one 300 level ARTH, they can receive permission to take one 400 level with permission from instructor.

Senior Year

STUDIO (16cr.)

(course range ART 401)

Seniors work semi-independently in their own studio spaces and are required to meet weekly with two faculty instructors (per semester) 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.
If any junior courses are unsatisfactory, students will need permission from the Assistant Dean of the School of Art & Design to continue into senior studios.
Senior studios are reserved for School of Art & Design senior students. Students that have a studio standing of first-year, sophomore, or junior are not permitted to register for senior studios unless permission is granted from the Assistant Dean.
Senior students complete 16 credits of studio by taking four sections of the following course (2 per semester) during their senior year:

- ART 401 - Senior Studio (4 credit hours)

SENIOR SHOW (0cr.)

The culmination of the BFA degree is the senior exhibition that happens in the final semester of senior year. During the final two weeks of the academic year, the School of Art and Design is transformed into an exhibition space where graduating seniors display their final work.
In the final senior semester students are required to register for the following course:

- ART 499 - Senior Show (0 credit hours)

Registration in this course and participation in the senior show is only permitted to those students who have successfully completed and satisfied all studio and art history credits/requirements.

ART HISTORY

If students have not completed the requirements for art history prior to senior year, they must complete those requirements during their senior year.

Drawing Requirement - 4 Credits

Students are required to take one 4-credit drawing course designed for the major:

- ART 282 - Figure Drawing (4 credit hours)
- ART 283 - Drawing: Observation to Abstraction (4 credit hours)
- ART 284 - Drawing: Analyzing Nature (4 credit hours)
- ART 285 - Digital Drawing (4 credit hours)

It is recommended that this requirement be fulfilled in the sophomore or junior year. First-year students are NOT permitted to take these drawing courses.

Liberal Arts Core - 19 Credits

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.

Take the following:

- ENGL 101 Writing I - 4 Credits **Or**
  ENGL 102 Writing II - 4 Credits
- EDUC 230 Psychological Foundations of Education - 3 Credits
- * Science Requirement - 4 credits
- ** Humanities - 4 credits
- Foreign Language - 4 credits

* One 4-credit course from the following areas: ASTR, BCHM, BIOL, CHEM, ENVS, GEOL, PHYS.
** One 4-credit course must be taken from 'SOAD: Humanities-Area B or D'

Education Core - 30 credits

Take the following:

- EDUC 231 Social Foundations of Education - 3 Credits
- EDUC 345 Education Fieldwork - 3 Credits
- 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

Common Ground - 1cr.

Take the following:

- UNIV 101 Common Ground - 1 Credit

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.

Student Learning Outcomes

Content Knowledge

1. Identifies, describes, and interprets works of art and other materials about art's cultural and historical context.
2. Understand the world through study of international, historic and contemporary art.

Critical Thinking

1. Integrate knowledge critically and analytically.
2. Observe, analyze, and explain motivation for and intent of an individual's work.

Communication

1. Formulates oral analysis of works of art in their historical or cultural context.
2. Produces written analysis of works of art in their historical or cultural context.

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 through 106 Foundations - 16 Credits
- 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 **Common Ground** requirement
The University **Lifetime Health & Wellness** requirement

NOTE: Most studio courses in the School of Art & Design have studio materials associated. Please see BannerWeb for current fees.

Minors Offered by the School of Art & Design

Art History
The 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

Technical Minor

The NYSCC technical Minor is an integrative minor providing intersections across a wide variety of mediums and skillsets. Coursework is offered across the School of Art & Design, School of Engineering, and Performing Arts Division. Students will be exposed to a variety of skillsets and materials via hands-on learning and tactile material research. Students will enhance their collaborative problem-solving skills, analytical thinking, project management, and leadership skills.

Requirements for the Technical Minor:

(Choose a minimum of 16 credits from the courses below)

- ART 382 (382L) Ceramic Materials I: Claybodies and Glazes (4 credit hours)
- ART 383 (383L) Ceramic Materials II: Problem Solving for Artists (4 credit hours)
- ART 484 (484L) Introduction to Kiln Procedures and Construction (4 credit hours)
- ART 399 (399L) Glaze Effects and Color (4 credit hours)
- ART 290 Wood Studio Practicum (2 credit hours)
- ART 387 (387L) Tools/Strategies: Digital Design/Fabrication (4 credit hours)
- ART 200 Practicum in Technical Glass Blowing (2 credit hours)
- ART 202 Introduction to Modeling and Mold-making (4 credit hours)
- ART 291 Practicum in Technical Metal Fabrication (2 credit hours)
- ART 295 Technical Glassblowing (2 credit hours)
- ART 323 Studio Lighting (2 credit hours)
- ART 388 Methods in Electronic Arts (2 credit hours)
- ART 389 Exhibition Design (2 credit hours)
- ART 390 (390L) Methods of Digital Output (2 credit hours)
- ENGR 102 Solid Works (2 credit hours)
- ENGR 107 Machine Shop (1 credit hour)
- PDAT 220 Design Fundamentals for Stage, Dance and Film (4 credit hours)
- PDAT 221 Making with Fabric (4 credit hours)
- PDAT 223 Sound Design and Technology (4 credit hours)
- PDAT 224 Theatre Lighting and MultiMedia Technologies (2 credit hours)
- PDAT 225 Woodworking Techniques for the Stage (2 credit hours)
- PDAT 226 Scenic Painting (2 credit hours)
- PDAT 228 Costume Design for Dance (2 credit hours)
- PDAT 229 Transforming Fabric (4 credit hours)

Total credit hours 16 (minimum)

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

Mission Statement

The College of Business advances Alfred University's mission and goals in providing intellectual leadership through teaching, research and service. We provide active-learning driven educational programs in business management to interdisciplinary undergraduate and graduate students who value an intimate, interactive, student-centered learning environment. We develop our students into ethical business leaders who can think critically and communicate effectively in both domestic and global arenas. Our faculty conducts discipline based, applied and instructional research that bridge the gap between business theory and practice.

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 Association, 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.

First Year Seminar

- BUSI 105 Business Perspectives - 1 Credit

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.

Written Communication

- ENGL 101 Writing I - 4 Credits

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.

Quantitative Reasoning

- MATH 101 or MATH 104 or MATH 151 or MATH 152 or MATH 181 or BUSI 150

Humanities

Each student must complete three - 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 three - 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 three - 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 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 2 credits is required in each of the humanities, natural sciences, and social sciences categories.

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 arts & science elective requirements for the College of Business and the School of Engineering. Please note 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
ENGR 305
ENVS 205
MATH 101, 102, 104, 151, 152, 181, 253, 271, 371
MIS 101
PSYC 221
Topics or Independent Studies Courses in MATH, if pre-approved by the student's Dean.

Humanities
ARTH – 210, all 300+ level courses
CHIN 101, 102, 201, 202
CLAS 201
COMM 205, 412
CSCI 305
DANC 211
ENGL 200:499
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, 213, 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
SIGN 101, 102
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

Topics or Independent Studies in the above areas if pre-approved by the student's Dean.

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, 307, 308, 357
CHEM 105,105L, 106, 106L, 310, 315, 316, 321, 343, 345, 346, 372, 374, 400, 420, 423, 461, 490
CSCI 156, 157, 205
EQUS 205, 225, 226
DATA 156, 201, 202, 203, 205
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, 127
Topics or Independent Studies in the above areas if pre-approved by the student's Dean.

Social Science
ANTH 110, 120, 302, 303, 304, 309, 311, 312, 321, 400, 495
ATHT 242
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 306
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, 251, 261, 262, 270, 282, 300, 302, 310, 311, 320, 322, 332, 341, 342, 351, 362, 371, 372, 389, 400, 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
Topics or Independent Studies in the above areas, except ENGR, if pre-approved by the student's Dean.

AU Wellness
ATHT 111, 190, 215, 222
BIOL 105, 120

DANC 120, 200, 222, 223, 224, 226
PSYC 251, 322, 351
WELL 100, 101
WGST 351

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, Equine Business Management, 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 a 2.0 grade point average in the Business Professional Core classes shared by all majors
- 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 113 Descriptive Analytics & Statistics - 3 Credits
- BUSI 213 Research Methods - 3 Credits
- BUSI 457 International Business - 3 Credits **Or**
  BUSI 305 German Auto Industry - 4 Credits **Or**
  ECON 412 International Economics - 3 Credits **Or**
  FIN 458 International Financial Management - 3 Credits **Or**
  MKTG 489 International Marketing - 3 Credits **Or**
  EQUS 228 The Equine Industry in Ireland - 2 Credits
- BUSI 499 Business Policy - 3 Credits
- FIN 348 Managerial Finance - 3 Credits
- LAW 241 The Legal Environment of Business - 3 Credits
- * MATH 104 Quantitative Methods for Business - 4 Credits **Or**
  MATH 151 Calculus I - 4 Credits **Or**
  MATH 181 Discrete Mathematics - 4 Credits **Or**
  BUSI 150 Business Analytics Math - 3 Credits
- MGMT 328 Management and Organizational Behavior - 3 Credits
- MGMT 484 Operations Management - 3 Credits
- MIS 101 Analytics I - 3 Credits
- MIS 390 Introduction to Management Information Systems - 3 Credits
- MKTG 221 Marketing Principles and Management - 3 Credits
- ECON 201 Principles of Microeconomics - 4 Credits
- ECON 202 Principles of Macroeconomics - 3 Credits

* BUSI 150 required for Finance and Analytics Majors

- **Additional Requirements:**
  Students are required to complete a Field Experience option selected from the following choices:
- 2.5 cumulative GPA or higher
- Approved Internship (BUSI 485)
- Advanced courses with Active Learning Component (designated as Field Experience – CoB)

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

* FIN 348 is excluded from this selection

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 them 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 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, plus one upper-level course in economics 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 **Or**
  MATH 151 Calculus I - 4 Credits
- DATA 156 Introduction to Computing - 3 Credits
- DATA 201 Analytics II - 3 Credits
- DATA 202 Data Visualization and Analysis - 3 Credits
- DATA 203 Current Topics in Analytics - 3 Credits
- DATA 205 Intro to Database Management - 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 - 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
- MKTG 454

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 11x Exploration Lab - 2 Credits
- MATH 151 Calculus I - 4 Credits
- MATH 231 Introduction to Data Science - 4 Credits
- MIS 101 Analytics I - 3 Credits

Plus, choose 16 credit hours from the following:

- ART 232 Introduction to Video and Sonic Arts - 4 Credits
- ART 285 Digital Drawing - 4 Credits
- ART 332 Advanced Video Arts - 4 Credits
- ART 335
- ART 336 Generative and Interactive Animation - 4 Credits
- ART 340
- BIOL 405 Bioinformatics - 4 Credits
- CSCI 200+ (Any CSCI 200+ not already included)
- ENVS 206 Fieldcraft-Outdoor Proficiency - 4 Credits **Or**
  GEOL 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 **Or**
  GEOL 450 Independent Study - 1 to 4 Credits

Double Major - Data Analytics

• 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
• MIS 101 Analytics I - 3 Credits

Level I Statistics

Select one from:

BIOL 226 Biostatistics - 4 Credits
BUSI 113 Descriptive Analytics & Statistics - 3 Credits
ENGR 305 Engineering Statistics - 3 Credits
ENVS 205 Environmental Data Analysis - 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

Level II Statistics:

Select one from:

ECON 310 Applied Econometrics and Predictive Analytics - 3 Credits
MATH 231 Introduction to Data Science - 4 Credits
MATH 381 Mathematical Statistics - 4 Credits
PSYC 411 Advanced Psychological Research Methods and Statistics - 4 Credits

Research Methods:

Select one from:

BIOL 226 Biostatistics - 4 Credits
BUSI 213 Research Methods - 3 Credits
ENVS 205 Environmental Data Analysis - 4 Credits
POLS 431 Research Design and Strategies - 4 Credits Or
SOCI 431 Research Design and Strategies - 4 Credits
PSYC 220 Psychological Methods and Statistics - 4 Credits
PSYC 411 Advanced Psychological Research Methods and Statistics - 4 Credits

Total Credits: 31:36

*Courses can only be used once within the major; one course cannot fulfill two areas of the major requirements.

Equine Business Management

Alfred University's Equine Business Management degree provides a curriculum that combines core business subjects with a specialized focus in equestrian management, marketing and operations courses to equip students with the skills needed to be effective equine professionals as well as decision makers. In addition, Alfred University's focus on experiential learning helps shape the curriculum by providing students with hands on learning opportunities.

This unique experience offers students real world applications and exposure to ongoing challenges and opportunities in the equestrian industry. Graduates of Alfred University's Equine Business Management degree will be prepared to enter the workforce with a solid foundation in business coupled with direct experience working in the equine industry.

Students who wish to major in Equine Business Management must complete the Arts and Sciences Core, general education requirements, arts and sciences electives to total a minimum of 60 credit hours in addition to the Business Core Curriculum and the following courses.

- BUSI 439 Entrepreneurship in the 21st Century - 3 Credits
- LAW 442 Commercial Law - 3 Credits
- MGMT 485 Equestrian Operations Managmnt - 3 Credits
- MKTG 382 Sales Marketing - 3 Credits
- MKTG 333 Equine Marketing - 3 Credits

Equine Business Management Majors must earn a "C" or higher in each course listed above.

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 454 Security Analysis - 3 Credits
- FIN 455 Business Financial Decisions - 3 Credits
- FIN 458 International Financial Management - 3 Credits
- FIN 460 Seminar in Finance - 3 Credits

BUSI 150 or MATH 151 are required for Finance Majors, MATH 104 is not accepted for Quantitative Reasoning. Finance Majors must earn a "C" or higher in each course listed above.

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 them 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 - 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:

All MKTG 400+ Level Courses are for students at Junior Standing or higher with MKTG 221 and an additional MKTG Course as Pre-Requisites

- MKTG 311 Digital & Social Media Mrkting - 3 Credits
- MKTG 452 Market Research - 3 Credits
- MKTG 379 Consumer Behavior - 3 Credits
- MKTG 486 Integrated Marketing Communications - 3 Credits
- MKTG 499 Strategic Marketing Management - 3 Credits
- MKTG 489 International Marketing - 3 Credits

Plus, choose 3 credit hours from the following:

- MKTG 453 Marketing Practicum - 3 Credits
- MKTG 382 Sales Marketing - 3 Credits
- MKTG 322 Marketing Analytics - 3 Credits
- MKTG 460 Seminar in Marketing - 3 Credits

Double Major

The College of Business is excited to offer Accounting, Business Administration, Business Analytics, Finance, Equine Business Management, Health Planning and Management, and Marketing Double Major options to students at Alfred University!

Students seeking a Double Major in the College of Business **must complete the Business Professional Core as well as the classes listed below for each Double Major option**.

Students outside of the College of Business are welcome to select any of our programs for their Double Major. Students within the College of Business who have a Primary Major that is not Business Administration are welcome to add a Double Major within the College of Business also.

A Double Major refers to an in-depth study in a second disciplinary major. Double Majors are not linked to degree programs, and as such are available to students within or outside the academic unit offering the Double Major.

*Note: Students with a PRIMARY Major of Business Administration CANNOT add a Double Major within the College of Business, only outside of the College of Business. Students within the College of Business CANNOT have Business Administration as their Double Major as well.

Accounting Double Major Requirements

The Accounting program 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.

Accounting students must earn a C or higher in all Accounting Courses.

Accounting Double Major

- ACCT 211 Financial Accounting - 3 Credits
- ACCT 212 Managerial Accounting - 3 Credits
- 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
- ENGL 101 Writing I - 4 Credits
- FIN 300+
- LAW 442 Commercial Law - 3 Credits

Business Administration Double Major

The Business Administration program 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 them explore career options but also recommends courses to be taken over the sophomore, junior and senior years. The Business Administration program 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.

- 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 113 Descriptive Analytics & Statistics - 3 Credits
- BUSI 213 Research Methods - 3 Credits
- BUSI 499 Business Policy - 3 Credits
- BUSI 457 International Business - 3 Credits **Or**
  MKTG 486 Integrated Marketing Communications - 3 Credits **Or**

FIN 458 International Financial Management - 3 Credits **Or**
ECON 412 International Economics - 3 Credits **Or**
MGMT 306 International Human Resources - 3 Credits

- ECON 201 Principles of Microeconomics - 4 Credits
- ECON 202 Principles of Macroeconomics - 3 Credits
- ENGL 101 Writing I - 4 Credits
- FIN 348 Managerial Finance - 3 Credits
- LAW 241 The Legal Environment of Business - 3 Credits
- MATH 104 Quantitative Methods for Business - 4 Credits **Or**
  MATH 151 Calculus I - 4 Credits **Or**
  BUSI 150 Business Analytics Math - 3 Credits
- MGMT 328 Management and Organizational Behavior - 3 Credits
- MGMT 484 Operations Management - 3 Credits
- MIS 101 Analytics I - 3 Credits
- MIS 390 Introduction to Management Information Systems - 3 Credits
- MKTG 221 Marketing Principles and Management - 3 Credits
- * BUSI 300+ Electives

* 8 credits of upper level business electives

Business Analytics Double Major

The Business Analytics program 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 program 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.

- DATA 156 Introduction to Computing - 3 Credits
- DATA 201 Analytics II - 3 Credits
- DATA 202 Data Visualization and Analysis - 3 Credits
- DATA 203 Current Topics in Analytics - 3 Credits
- DATA 205 Intro to Database Management - 3 Credits
- DATA 401 Analytics Capstone Project - 3 Credits
- DATA 402 Analytics Seminar - 1 Credit
- ECON 310 Applied Econometrics and Predictive Analytics - 3 Credits
- * Analytics Electives

* 9 credits of electives from Analytics Major list options

Equine Business Management Double Major

Alfred University's Equine Business Management program provides a curriculum that combines core business subjects with a specialized focus in equestrian management, marketing and operations courses to equip students with the skills needed to be effective equine professionals as well as decision makers. In addition, Alfred

University's focus on experiential learning helps shape the curriculum by providing students with hands on learning opportunities.

This unique experience offers students real world applications and exposure to ongoing challenges and opportunities in the equestrian industry. Graduates of Alfred University's Equine Business Management program will be prepared to enter the workforce with a solid foundation in business coupled with direct experience working in the equine industry.

- BUSI 439 Entrepreneurship in the 21st Century - 3 Credits
- LAW 442 Commercial Law - 3 Credits
- MGMT 485 Equestrian Operations Managmnt - 3 Credits
- MKTG 333 Equine Marketing - 3 Credits
- MKTG 382 Sales Marketing - 3 Credits

Finance Double Major

The Finance program emphasizes fundamental accounting, economics, and finance concepts and theories, and provides applied practice to promote well-informed financial decision-making. The program 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 must earn a C or higher on all Finance Courses and must take BUSI 150 or MATH 151, MATH 104 is not an option for Finance students.

- 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 454 Security Analysis - 3 Credits
- FIN 455 Business Financial Decisions - 3 Credits
- FIN 458 International Financial Management - 3 Credits
- FIN 460 Seminar in Finance - 3 Credits

Health Planning and Management Double Major

The Health Planning & Management program 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 them 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.

- 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
- HLPM 485 Internship - 3 Credits
- HLPM 495 Seminar: Healthcare Planning and Management - 3 Credits

Marketing Double Major

The Marketing program provides students with applied experiences in new product development, market research and service learning. With hands on projects for real businesses, our Marketing students are set up for success before they graduate!

All Marketing students are required to earn a C or better in al Marketing Courses.

All MKTG 400+ Level Courses are for students at Junior Standing or higher with MKTG 221 and an additional MKTG Course as Pre-Requisites

- MKTG 311 Digital & Social Media Mrkting - 3 Credits
- MKTG 379 Consumer Behavior - 3 Credits
- MKTG 452 Market Research - 3 Credits
- MKTG 486 Integrated Marketing Communications - 3 Credits
- MKTG 489 International Marketing - 3 Credits
- MKTG 499 Strategic Marketing Management - 3 Credits
- MKTG 300+ Elective

Minors

1. **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

1. 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 **Or**
  BUSI 150 Business Analytics Math - 3 Credits **Or**
  MATH 151 Calculus I - 4 Credits

* ENGR 305, POLS/SOCI 230, or PSYC 221 may be substituted for BUSI 113

Plus two courses (6 Credits) 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 (3 Credits) 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 Classical World Theatre: History, Art, Politics & Society - 4 Credits
- THEA 200/300/400 Topics in Theatre (consult advisor) -1 to 4 Credits

Section B-Applied and Studio Skills Courses

- ART 111 Drawing for Non-Art Majors - 4 Credits
- ART 121 Sculpture for Non-Majors - 4 Credits
- ART 133 Photography for Non-Majors - 4 Credits
- ART 151 Ceramics for Non-Majors - 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 Playmaking: From Writing to Devising For the New Era - 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
- PDAT 120 Technical Theatre - 4 Credits
- PDAT 220 Design Fundamentals for Stage, Dance and Film - 4 Credits
- THEA 230 Stage Management and the Art of Production Collaboration - 4 Credits
- THEA 240 Acting I - 4 Credits
- THEA 270 Play Production - 2 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 their 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 221 may be substituted for BUSI 113
** ENGR 306 can substitute only for ENGR Majors
*** 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 27 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 **Or**
  MATH 151 Calculus I - 4 Credits
- ** DATA 156 Introduction to Computing - 3 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 221 may be substituted for BUSI 113
** CSCI 156 may be substituted for DATA 156

Plus two courses (6 credits) from among the following courses:

- BUSI 322 Business Intelligence - 3 Credits
- 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 27

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 221 may be substituted for BUSI 113

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

- ART 232 Introduction to Video and Sonic Arts - 4 Credits
- ART 285 Digital Drawing - 4 Credits
- ART 332 Advanced Video Arts - 4 Credits
- ART 335
- ART 336 Generative and Interactive Animation - 4 Credits
- ART 340
- 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 300+ Upper-level Economics Course - 3 Credits
- ECON 300+ Upper-level Economics Course - 3 Credits
- ECON 460 Seminar in Economics - 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:

- 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 382 Sales Marketing - 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 2 - 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
- 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 **And**
  MKTG 221 Marketing Principles and Management - 3 Credits

* Junior Class Standing Required

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

* SJST/SOCI 110 can be substituted for SJST 101
** 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 100 Topics in Leadership - 1 to 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
- POLS 150 World Politics - 4 Credits

- POLS 214 Environment, Politics and Society - 4 Credits
- POLS 253 Dictatorship and Democracy - 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

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.

All MKTG 400+ Level Courses are for students at Junior Standing or higher with MKTG 221 and an additional MKTG 300+ Level Course as Pre-Requisites

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 379 Consumer Behavior - 3 Credits

* ENGR 305, POLS/SOCI 230 or PSYC 221 may be substituted for BUSI 113

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

- MKTG 311 Digital & Social Media Mrkting - 3 Credits
- MKTG 322 Marketing Analytics - 3 Credits
- MKTG 452 Market Research - 3 Credits
- MKTG 453 Marketing Practicum - 3 Credits
- MKTG 460 Seminar in Marketing - 3 Credits
- MKTG 382 Sales Marketing - 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
- Any 4 Credit COMM
- 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

The College

The New York State College of Ceramics at Alfred University was established April 11, 1900 as The New York State School of Clay-working and Ceramics at Alfred University. When legislation was enacted creating the State University of New York (1948), the College became one of what are now five statutory units of the SUNY enterprise, with the Ceramics College continuing to be operated by Alfred University on behalf of the SUNY Board of Trustees. As a state-supported unit of Alfred University, students, faculty and staff gain the benefits of both a high quality, small university environment and a high quality, public higher education system. Students benefit from a state-supported tuition rate.

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

Our Mission

The College of Liberal Arts and Sciences (CLAS) at Alfred University fosters students' intellectual, creative, and personal development. Our curriculum builds upon the University's history of inclusiveness, commitment to global awareness, and enduring ties to the community. Through a breadth of programs and the depth offered in the majors, students explore and engage with the world, think critically about it, act creatively within it, reflect on their experiences, and share the knowledge they acquire with others. We educate life-long learners.

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, as well as 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 an ever-increasing number of majors and 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
- The First-Year Experience (FYE) or Transfer Seminar requirement
- The requirements for a CLAS-approved major
- 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 the 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.
- See the AU policy on "Transfer of Credit" for more detailed information.

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 and 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 reassigned 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 lasting intellectual engagement with scholarly and cultural issues.

The General Education Program is divided into two parts: Basic Competencies and Areas of Knowledge.

The first part 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. Students are expected to complete the Basic Competencies during the first two years of study.

The second part of the General Education Program 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 lasting intellectual engagement with scholarly and cultural issues. 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 in the College of Liberal Arts and Sciences 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 Reading and Writing - 539 or lower
- ACT English - 25 or lower

Students with the following scores should take ENGL 102:

- SAT Reading and Writing - 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 Reading and Writing - 740 or higher
- ACT English - 30 or higher

Students who have not taken the SAT or ACT but would like to take an optional written communication placement test should contact the division chair, Dr. Melissa Ryan. Students without test scores who do not take the placement test will be placed into ENGL 101.

AP Credits

Students who score a 4 on the AP English Language and Composition or AP English Literature and Composition test earn credit for ENGL 101 (4 credits) and should begin with ENGL 102. Students who score a 5 on the AP English Language and Composition

or AP English Literature and Composition test earn credit for ENGL 101 (4 credits) and 2 additional elective credits. They should also begin with ENGL 102.

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 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 students plan to wait to take a language course in their sophomore year, it is highly recommended that students take the Placement Exam during the first week of their 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, they 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 102 Mathematics for Teachers: Grades K-6 - 4 Credits

MATH 104 Quantitative Methods for Business - 4 Credits

MATH 131

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 221 Psychological Research Methods and Statistics I - 4 Credits

PSYC 222 Psychological Research Methods and Statistics II - 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 1 credit 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 transfer students make the transition to Alfred University. Students take the Transfer Seminar (CLAS 101) with the Assistant Dean 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 which will help them succeed at Alfred. Throughout the seminar, students further develop core skills that lead to academic and professional accomplishment. The Transfer Student Program also facilitates mentoring relationships among 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 the opportunity to work with many different teachers and student groups to discover what inspires you! As you explore the possibilities, you'll also fulfill 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. When you do so, you will also choose a faculty member from that discipline to become your faculty advisor.

Majors

Biology and Biochemistry

New discoveries and innovative technologies are pushing the boundaries of what we know about ourselves and the living world. Biological science graduates today need to be able to move into a diverse array of careers, from health-related professions such as medicine, dentistry and veterinary, to post-graduate study across a range of topics such as biotechnology, ecology, or animal sciences, to employment opportunities such as teaching or biological research. We train our students to have a strong, broad foundation in biology while providing numerous opportunities for students to develop specialized expertise and technical and research skills they need in order to be competitive applicants when they leave Alfred University.

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 and Biochemistry 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, and calculus. 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) reflects 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 contribute to and collaborate 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.

Biochemistry B.S.

Requirements for the major

Each student completes a core of courses and selects a prescribed number of elective courses related to their 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:
1. Foundation and Core Courses - 50
2. Specialization Courses - 8
3. Related Courses - 16
Total Credit Hours - 74

1. 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
- BCHM 390 Junior Seminar - 1 Credit
- BCHM 420 Biochem: Proteins & Metabolism - 4 Credits
- BCHM 422 Biochem: Nucleic Acids - 4 Credits
- BCHM 490 Senior Seminar - 1 Credit
- CHEM 105 General Chemistry I - 3 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 315 Organic Chemistry I - 3 Credits
- CHEM 315L Laboratory-Organic Chem I - 1 Credit
- CHEM 316 Organic Chemistry II - 3 Credits
- CHEM 316L Laboratory-Organic Chem II - 1 Credit
- CHEM 321 Introduction to Analytical Chemistry - 4 Credits
- CHEM 342/343 Physical Chemistry 1 - 4 Credits

2. Specialization

- Take 8 credits from BIOL, BCHM, or CHEM at the 300- or 400-level, in consultation with academic advisor (excluding BIOL/BCHM/CHEM 450, 485)

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

Biology B.A.

Requirements for the major
Each student completes a core of courses and selects a prescribed number of elective courses related to their 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:
1. Foundation and Core Courses - 26
2. Specialization Courses - 12
3. Related Courses - 11
Total Credit Hours - 49

1. 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 12 credit hours. Recommend completion of one research intensive course (*RI).

- BIOL 300 Topics in Biology - 1 to 4 Credits
- BIOL 302 General Microbiology - 4 Credits
- BIOL 306 Human Pathophysiology - 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/BCHM 320 Toxicology - 4 Credits
- BIOL 322 Botany - 4 Credits
- BIOL/BCHM 324 Phage Genomics - 2 Credits - (*RI)
- 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 400 Research Topics - 4 to 5 Credits (*RI)
- BIOL 402 Immunology - 4 Credits
- BIOL 405 Bioinformatics - 4 Credits (*RI)
- BIOL/BCHM 420 Biochemistry: Proteins and Metabolism - 4 Credits
- BIOL/BCHM 422 Biochemistry: Nucleic Acids - 4 Credits
- BIOL 425 Physiological Plant Ecology - 4 Credits (*RI)
- ENVS 315 Herpetology - 3 Credits
- ENVS 330 Ornithology - 4 Credits

3. BA related courses:

Take all courses; additional courses in math and physics are strongly recommended.

- CHEM 105 General Chemistry I - 3 Credits
- CHEM 105L General Chemistry I Laboratory - 1 Credit
- CHEM 106 General Chemistry II - 3 Credits
- CHEM 106L General Chemistry II Laboratory - 1 Credit
- One 300-level Chemistry course - 3 Credits

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. Demonstrate proficiency with equipment and procedures used in modern biological laboratory and field research.
3. Conduct research, construct hypotheses and/or research questions, and draw conclusions that connect new knowledge to existing knowledge.
4. Communicate principles as they cross boundaries of traditional biological disciplines by effectively communicating information in multiple formats, and by using revision to edit work for clarity, consistence, and coherence.

5. Be able to analyze and answer biologically relevant problems through the successful application of quantitative and analytical methods.

Biology B.S.

Requirements for the major
Each student completes a core of courses and selects a prescribed number of elective courses related to their 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:
1. Foundation and Core Courses - 26
2. Specialization Courses - 16
3. Related Courses - 28
Total Credit Hours - 70

1. 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 (*RI). 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.

A. Biological Sciences Concentration

- BIOL 300 Topics in Biology - 1 to 4 Credits
- BIOL 302 General Microbiology - 4 Credits
- BIOL 306 Human Pathophysiology - 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/BCHM 320 Toxicology - 4 Credits
- BIOL 322 Botany - 4 Credits
- BIOL/BCHM 324 Phage Genomics- 2 credits - (*RI)
- 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 400 Research Topics - 4 to 5 Credits - (*RI)
- BIOL 402 Immunology - 4 Credits
- BIOL 405 Bioinformatics - 4 Credits
- BIOL/BCHM 420 Biochemistry: Proteins and Metabolism - Credits
- BIOL/BCHM 422 Biochemistry: Nucleic Acids - 4 Credits
- BIOL 425 Physiological Plant Ecology - 4 Credits - (*RI)
- ATHT 392 Biomechanics - 3 Credits
- ATHT 393 Physiology of Exercise - 3 Credits
- ENVS 315 Herpetology - 3 Credits
- ENVS 320 Advanced GIS Applications - 4 Credits
- ENVS 330 Ornithology - 4 Credits

B. Animal Science Concentration

Take 16 credit hours. Recommend completion of one research intensive course (*RI).

- BIOL 300 Topics in Biology - 1 to 4 Credits
- BIOL 346 Animal Nutrition - 4 Credits
- BIOL 348 Animal Behavior - 4 Credits
- BIOL 353 Tropical Biology - 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 - (*RI)

C. Ecology and Evolution Concentration

Take 16 credit hours. Recommend completion of one research intensive course (*RI).

- BIOL 300 Topics in Biology - 1 to 4 Credits
- BIOL 315 Genetics and Evolution of Populations - 4 Credits
- BIOL 322 Botany - 4 Credits
- BIOL/BCHM 324 Phage Genomics - 2 Credits - (*RI)
- 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 - (*RI)
- BIOL 425 Physiological Plant Ecology - 4 Credits - (*RI)
- ENVS 315 Herpetology - 3 Credits
- ENVS 320 Advanced GIS Applications - 4 Credits
- ENVS 330 Ornithology - 4 Credits

D. Human Biology Concentration

Take 16 credit hours. Recommend completion of one research intensive course (*RI).

- BIOL 300 Topics in Biology - 1 to 4 Credits
- BIOL 302 General Microbiology - 4 Credits
- BIOL 306 Human Pathophysiology - 4 Credits
- BIOL 307 Anatomy and Physiology: Nerves, Muscles, Skeleton - 4 Credits
- BIOL 308 Anatomy and Physiology: Viscera - 4 Credits
- BIOL/BCHM 320 Toxicology - 4 Credits
- BIOL/BCHM 324 Phage Genomics - 2 Credits - (*RI)
- BIOL 402 Immunology - 4 Credits
- BIOL/BCHM 420 Biochemistry: Proteins and Metabolism - 4 Credits
- BIOL/BCHM 422 Biochemistry: Nucleic Acids - 4 Credits
- BIOL 400 Research Topics - 4 to 5 Credits - (*RI)
- ATHT 392 Biomechanics - 3 Credits
- ATHT 393 Physiology of Exercise - 3 Credits

E. Molecular Biology Concentration

Take 16 credit hours. Recommend completion of one research intensive course (*RI).

- BIOL 300 Topics in Biology - 1 to 4 Credits
- BIOL 302 General Microbiology - 4 Credits
- BIOL 306 Human Pathophysiology - 4 Credits
- BIOL 320 Toxicology - 4 Credits
- BIOL/BCHM 324 Phage Genomics - 2 Credits - (*RI)
- 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 - (*RI)

F. Plant Biology Concentration

Take 16 credit hours. Recommend completion of one research intensive course (*RI).

- BIOL 300 Topics in Biology - 1 to 4 Credits
- 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 - (*RI)
- BIOL 425 Physiological Plant Ecology - 4 Credits

3. Related Courses

A. Take all of the following:

- CHEM 105 General Chemistry I - 3 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 315 Organic Chemistry I - 3 Credits
- CHEM 315L Laboratory-Organic Chem I - 1 Credit
- CHEM 316 Organic Chemistry II - 3 Credits
- CHEM 316L Laboratory-Organic Chem II - 1 Credit
- 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

Biology Double Major

Each student completes a core of courses and selects a prescribed number of elective courses related to their personal and career interests. Additional courses in chemistry are required. All courses taken as part of the Biology double major must be passed with a grade of C or better.

Summary of Requirements for the Double Major in Biology

Foundation and Core Courses - 26
Specialization Courses - 12
Related Courses - 11
Total Credit Hours - 49

Foundation and Core Courses

1. **Take one of the following:**

- BIOL 150 Biological Foundations - 4 Credits
- BIOL 155 Biological Foundations: Research Project - 4 Credits

1. **Take all of the following Core Courses:**

- 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 (RI) course.

- BIOL 300 Topics in Biology - 1 to 4 Credits
- BIOL 302 General Microbiology - 4 Credits
- BIOL 306 Human Pathophysiology - 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 320 Toxicology - 4 Credits
- BIOL 322 Botany - 4 Credits
- BIOL 324 Phage Discovery (RI) – 2 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 400 Research Topics (RI) - 4 to 5 Credits
- BIOL 402 Immunology - 4 Credits
- BIOL 405 Bioinformatics (RI) - 4 Credits

- BIOL 420 Biochemistry: Proteins and Metabolism - 4 Credits
- BIOL 422 Biochemistry: Nucleic Acids - 4 Credits
- BIOL 425 Physiological Plant Ecology (RI) - 4 Credits

Related courses: Take all courses:

- CHEM 105 General Chemistry I - 3 Credits
- CHEM 105L General Chemistry I Laboratory - 1 Credit
- CHEM 106 General Chemistry II - 3 Credits
- CHEM 106L General Chemistry II Laboratory - 1 Credit
- A 300-level Chemistry course – 3-4 Credits

Chemistry

Chemistry attempts to identify and rationalize the transformations and structure of matter, the ways matter and light interact, and the physical and chemical properties of all substances. Essentially, chemists seek to relate macroscopic observable properties to the nature of matter on an atomic and molecular scale.

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.

All courses taken as part of the Chemistry major must be passed with a grade of C or better.

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.

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

Chemistry B.A.

Requirements for the Major

- CHEM 105/106 General Chemistry - 8 Credits
- CHEM 105L/106L General Chemistry Labs - 2 Credits
- CHEM 315/316 Organic Chemistry - 8 Credits
- CHEM 315L/316L Organic Chemistry Labs - 2 Credits
- CHEM 321 Introduction to Analytical Chemistry - 4 Credits
- CHEM 340 Physical Chemistry-Quant. Mech - 3 Credits
- CHEM 341 Physical Chemistry Lab - 1 Credit
- CHEM 342 Physical Chem - Thermodynamics - 4 Credits
- 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 - 1 Credit

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.

Chemistry B.S.

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 - 3 Credits
- PHYS 402 Quantum Mechanics II - 3 Credits

Total credit hours 63 or more

Chemistry Double Major

Each student completes a core of courses and selects a prescribed number of elective courses related to their personal and career interests. All courses taken as part of the Chemistry major must be passed with a grade of C or better; transferred courses not already described in pre-existing articulation agreements must have approval from the Division of Chemistry to receive major credit.
Any lab courses indicated as having been delivered in an online format are not accepted by the Division of Chemistry.

Requirements for the double major
Core Courses - 38-43
Related Courses - 12
Total Credit Hours - 50-55

Core Courses

- CHEM 105/106 General Chemistry - 6 Credits
- CHEM 105L/106L General Chemistry Labs - 2 Credits
- CHEM 315/316 Organic Chemistry - 6 Credits
- CHEM 315L/316L Organic Chemistry Labs - 2 Credits
- CHEM 321 Introduction to Analytical Chemistry - 4 Credits **Or**
  CHEM 340 Physical Chemistry-Quant. Mech - 3 Credits
- CHEM 342 Physical Chem - Thermodynamics - 4 Credits **Or**
  ENGR 204 **And**
  CEMS 204 Thermodynamics of Materials - 4 Credits **And**
  CEMS 344 Properties II: Electrical, Magnetic, and Optical - 4 Credits
- CHEM 341 Physical Chemistry Lab - 1 Credit
- CHEM 372 Inorganic Chemistry - 3 Credits
- CHEM 374 Inorganic Chemistry Laboratory - 1 Credit
- CHEM 423 Instrumental Analysis - 3 Credits **Or**
  CEMS 347 Spectroscopy - 2 Credits **And**
  CEMS 349 X-ray Characterization - 2 Credits
- CHEM 461 Advanced Chemistry Laboratory I - 2 Credits
- CHEM 490 Chemistry Seminar - 1 Credit

Related Courses

- 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

Communication Studies

We use communication to craft ideas, connect ourselves with others, and to create personal identities and shared cultures. The methods and practices involved in communicative processes are gleaned from a long interdisciplinary tradition that values diversity in both knowledge and practice. The mission of the Communication Studies program at AU is to help students prepare for their futures by providing a foundation that teaches them to construct, evaluate, and distribute messages within and for an increasingly interconnected and globalized society.

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.

Requirements For The Major

All courses used to complete the major must have grades of "C" or better. 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

Requirements For the Double Major

The requirements for the double major in Communication Studies are the same as the requirements for the major, as listed above.

What is a Double Major?

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.

Computer Science

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 earns 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.

Bachelor of Art 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 206 Algorithm Design - 4 Credits
- CSCI 225 Computer Organization - 4 Credits
- CSCI 305 Theory of Computation - 4 Credits
- CSCI 425 Operating Systems - 4 Credits
- MATH 151 Calculus I - 4 Credits
- MATH 181 Discrete Mathematics - 4 Credits

- Plus 13 credit hours of computer science courses and electives, at least 8 of which must be 300-level.

Electives for the Bachelor of Arts major in Computer Science:

- CSCI 205 Database Systems - 4 Credits
- CSCI 315 Computer Networking - 4 Credits
- MATH 231 Introduction to Data Science - 4 Credits
- MATH 351 Introduction to Operations Research - 4 Credits
- MATH 371 Linear Algebra - 4 Credits
- MATH 381 Mathematical Statistics - 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

Requirements For The Double Major

The requirements for the double major in Computer Science are the same as the requirements for the major, as listed above.

What is a Double Major?

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.

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 Introduction to Sociology - 4 Credits
- *CRIM/SOCI 245 Crime and Society - 4 Credits
- POLS 332 Judicial Processes - 4 credits
- *CRIM/SJST 340 Concepts of Penology - 4 Credits
- *CRIM/SOCI/SJST 344 Sociology of Deviance and Criminal Behavior - 4 Credits
- *CRIM 351 Seminar in Criminal Behavior - 4 Credits

II. Electives (20 credit hours)

- *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 310 Executive Branch Institutions - 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 210 Communication and Counseling Skills - 2 credits
- *PSYC 282 Social Psychology - 4 Credits
- *PSYC 342 Psychopathology - 4 Credits
- SOCI 236 Cults, Religions, and Fandom - 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, students majoring in Criminal Justice Studies are required to attend at least two institutes. An institute is typically a half-day session or workshop, offered at least once per year, usually once each semester. Institutes deal with specific issues facing professionals in the criminal justice system.

All courses used to complete the major must be passed with a "C" or better.

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.

Requirements for the double major

The requirements for the double major in Criminal Justice Studies are the same as the requirements for the major, as listed above.

What is a Double Major?

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

Education

A career in education can be immensely rewarding, offering the dedicated professional many opportunities to make a lifelong, positive impact on the lives of children and young people. Alfred University has a long tradition of preparing candidates of excellence for positions teaching in public and private schools in our region, and across the world.

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.

Successful completion of either the major or minor programs leads to initial certification as a New York State teacher (with reciprocity among 48 other states).

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

- 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 to proceed in the major.

The practicum portion of the program starts in the spring semester of the student’s junior year, and includes field-based coursework in early childhood/childhood curriculum, orientation, methods of teaching literacy, and integrated methodology of social studies, math, science and technology. The required concurrent field experience takes 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 the student teaching experience. 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 placements (fall semester). 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

Spring Semester - Junior Year

- 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 and Assessment in the Early Childhood/Childhood Classroom - 3 Credits

Core Courses

Fall Semester - Senior Year

- EDUC 461 Student Teaching for Early Childhood/Childhood Certification - 12 Credits
- EDUC 472 Competency Skills in Teaching Literacy - 3 Credits

Additional Program Requirements for All Programs leading to New York State Teacher Certification

Examinations:

- Content Specialty Test (CST)
  - The appropriate Content Specialty Test(s) for the appropriate developmental level(s) and certification area(s)
  - Must pass before applying for a teaching certificate
- Educating All Students (EAS)
  - Must pass before applying for a teaching certificate
- auTPA:
  - Completed during the student teaching semester
  - Must pass 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). The SAVE workshop is provided within EDUC 231 every semester and the DASA workshop is offered online every semester. The Child Abuse Identification and Reporting class is not offered for undergraduates at AU, but it can be taken online through NYSED.

Fingerprinting/Background Check:

NYS requires candidates applying for Initial (first) certification to complete a fingerprinting/background check. Students will need to have fingerprinting completed for the Practicum/Fieldwork semester in order to comply with school district policies. Fingerprinting information can be obtained from the Division of Education office.

English

The study of English fosters critical thought and imaginative insight. It also heightens an awareness and appreciation of the power, beauty, and passion of the written word. Class discussions increase students' opportunity, in Thoreau's words, to "live deliberately."

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. All courses used to complete the major must have grades of "C" or better.

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

Requirements for the double major

The requirements for the double major in English are the same as the requirements for the major, as listed above.

What is a Double Major?

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.

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 their 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.

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 cross-registration agreement. Advisors can assist in such course selections; in some cases these may substitute from courses listed below.

All courses used to complete the major must have grades of "C" or better.

Requirements for Environmental Studies 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 221 Psychological Research Methods & Statistics I **Or**
  BUSI 113 Descriptive Analytics & Statistics - 3 Credits
- 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 I. Requirement

One course from among the following:

- BIOL 150 Biological Foundations - 4 Credits
- CHEM 105 General Chemistry - 3 Credits **And**
  CHEM 105L General Chemistry I Laboratory - 1 Credit
- GEOL 101 This Dynamic Earth - 4 Credits
- PHYS 111 Introductory General Physics I - 4 Credits **Or**
  PHYS 125 Physics I - 4 Credits

B. Breadth II. Requirement

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
- PHIL 281 Ethics - 4 Credits
- POLS 411

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 **And**
  CHEM 106L General Chemistry II Laboratory - 1 Credit
- CHEM 310 Basic Organic Chemistry - 3 Credits **Or**
  CHEM 315 Organic Chemistry I - 3 Credits **And**
  CHEM 315L Laboratory- Organic Chem I - 1 Credit
- CHEM 316 Organic Chemistry II - 3 Credits **And**
  CHEM 316L Laboratory- Organic Chem II - 1 Credit
- CHEM 321 Introduction to Analytical Chemistry - 4 Credits
- ENVS 300 Special Topics - 1 to 4 Credits
- ENVS 310 Ecology of the Bahamas - 3 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 231 Climate Change Mechanics - 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 Environmental Studies 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 221 Psychological Research Methods & Statistics I **Or**
  BUSI 113 Descriptive Analytics & Statistics - 3 Credits
- 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 **And**
  CHEM 105 General Chemistry I Laboratory - 1 Credit
- 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
- PHIL 281 Ethics - 4 Credits
- POLS 313 State and Local Politics - 4 Credits
- POLS 411
- PSYC 282 Social Psychology - 4 Credits

Requirements for the Environmental Studies Major-Environmental 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 221 Psychological Research Methods & Statistics I **Or**
  BUSI 113 Descriptive Analytics & Statistics - 3 Credits
- 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 **And**
  CHEM 105 General Chemistry I Laboratory- 1 Credits
- CHEM 106 General Chemistry II - 3 Credits **And**
  CHEM 106L General Chemistry II Laboratory - 1 Credit

- 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 **And**
  CHEM 315L Laboratory Organic Chemistry I - 1 Credit
- CHEM 321 Introduction to Analytical Chemistry - 4 Credits
- ENVS 300 Special Topics - 1 to 4 Credits
- ENVS 310 Ecology of the Bahamas - 3 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 231 Climate Change Mechanics - 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.

Sustainable Practice (Double Major)

Our sustainability programs offer undergraduate students a transdisciplinary approach to understand sustainability issues, develop solutions, and communicate them to organizations and community.
The Sustainable Practice second major is structured to create connections with the student’s first major, deepening engagement with their primary discipline. This second major will assist students with a broader understanding of the context their industry operates in and equip them with the skills and knowledge necessary to solve problems

associated with that environmental and social context. These are enduring, practical competencies that are transferable across economic and knowledge sectors. Consumers, clients, investors, regulators, and other stakeholders increasingly expect to see evidence that organizations follow sustainable practices. These expectations are demanding to meet, and skilled personnel are required to analyze policies, collect data, and develop solutions to environmental issues. Graduates with core competencies in their primary field of study and with sustainability credentials will be highly competitive. Potential career opportunities are as varied as the programs offered at AU. The Sustainable Practice second major will increase employability in the student's primary field of study and open unique responsibilities: positions dedicated to sustainability data collection, analysis, reporting, or compliance are now found in every sector.
The 22-credit Minor in Sustainability provides students with the basic knowledge of natural and human systems needed to engage meaningfully with sustainability issues. It can be paired with any major.

Requirements for Sustainable Practice Major

Total credit hours 32

At least 12 unique credits are required.

Core Courses (16 credit hours)

- ENVS 101 Environmental Studies I - Natural Science - 4 Credits
- GEOL 231 Climate Change Mechanics - 4 Credits
- PHIL 281 Ethics - 4 Credits
- SUST 101

Technical Competency (3 credit hours)

- BIOL 226 Biostatistics - 4 Credits
- BUSI 113 Descriptive Analytics & Statistics - 3 Credits
- BUSI 150 Business Analytics Math - 3 Credits
- DATA 202 Data Visualization and Analysis - 3 Credits
- ECON 310 Applied Econometrics and Predictive Analytics - 3 Credits
- ENGR 305 Engineering Statistics - 3 Credits
- ENVS 205 Environmental Data Analysis - 4 Credits
- ENVS 220 Introduction to Geographic Information Systems - 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

Electives (11 credit hours) 8 credits must be from 300-400 level.

- ANTH 110 Cultural Anthropology - 4 Credits
- ART 382 Ceramic Materials I: Claybodies and Glazes - 4 Credits

- ARTH 367 Landscape Across Cultures - 4 Credits
- BIOL 320 Toxicology - 4 Credits
- BIOL 354 Ecology - 4 Credits
- BIOL 357 Conservation Biology - 4 Credits **Or**
  ENVS 357 Conservation Biology - 4 Credits
- BIOL 425 Physiological Plant Ecology - 4 Credits
- ENVS 415 Natural Resources Management - 3 Credits
- GEOL 106 Elementary Oceanography - 4 Credits
- GEOL 201 Surficial Geology - 4 Credits
- GEOL 464 Hydrogeology - 4 Credits
- GLBS 101 Introduction to Global Studies - 4 Credits
- MECH 438 Alternative Vehicle Energy Control and Powertrain Design - 3 Credits
- MUSC 205 SOUND GATHERING: Music, Sound, and Environment - 2 Credits
- POLS 110 American Politics - 4 Credits
- POLS 214 Environment, Politics and Society - 4 Credits
- POLS 237 Media and Politics - 4 Credits
- RNEW 201 Renewable Energy - 3 Credits
- RNEW 310 Fuel Cell Principles and Technology - 3 Credits
- RNEW 355 Power System Operation and Economics - 3 Credits
- RNEW 431 Wind Energy - 3 Credits
- RNEW 432 Solar Energy Systems - 3 Credits
- RNEW 461
- SJST 101 Introduction to Social Justice Studies - 4 Credits
- SJST 304
- SOCI 110 Introduction to Sociology - 4 Credits

Appropriate topics courses can be substituted within electives with advisor permission.

Capstone (2 credits)

- ENVS 450 Independent Study - 1 to 4 Credits

Sustainability Minor

Total credit hours 22

Core courses (12 credits)

- ENVS 101 Environmental Studies I - Natural Science - 4 Credits
- GEOL 231 Climate Change Mechanics - 4 Credits
- SUST 101

Electives (10 credits)

- See electives list for major.

Electives are selected by the student and minor advisor, chosen from the list of electives in the Sustainable Practice major.

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. All courses used to complete the major must have grades of "C" or better.

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.

Requirements for the double major:

Requirements for the double major in Foreign Languages and Culture are the same as the requirements for the major, as listed above.

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

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

All courses used to complete the major must have grades of "C" or better. 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 Environmental Biogeochemistry - 4 Credits

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 231 Climate Change Mechanics - 4 Credits
- GEOL 307 Stratigraphy and Sedimentation - 4 Credits
- GEOL 408 Tectonics - 4 Credits
- GEOL 464 Hydrogeology (if not used above) - 4 Credits

Total Credit Hours for General Track Major 40

Planetary Science Track

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

- ASTR 302 - 2 credits
- CHEM 105 General Chemistry I - 3 Credits **And**

CHEM 105L General Chemistry I Laboratory - 1 Credit
- CHEM 106 General Chemistry II - 3 Credits **And**
  CHEM 106L General Chemistry II Laboratory - 1 Credit
- MATH 151 Calculus I - 4 Credits
- MATH 152 Calculus II - 4 Credits

and 8 credits selected from the following:

- CEMS 235 Thermodynamics of Materials - 4 Credits
- CHEM 343 Physical Chemistry I - 4 Credits
- CHEM 346 Physical Chemistry II - 3 Credits
- GEOL 408 Tectonics - 4 Credits
- GEOL 464 Hydrogeology (if not used above) - 4 Credits

Total Credit Hours for Planetary Science Track Major 46

Earth Science Education Track

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

- 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.

and 8 credits selected from the following:

- 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 231 Climate Change Mechanics - 4 Credits
- GEOL 307 Stratigraphy and Sedimentation - 4 Credits
- GEOL 408 Tectonics - 4 Credits
- 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

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 221 Psychological Research Methods and Statistics I - 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
- SOCI 470 Application of Sociology Field Work - 2 to 4 Credits

Total credit hours required (minimum) 34

All courses used to complete the major must have grades of "C" or better.

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.

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 experience of the student's choice.

I. Introduction to Global Studies

- GLBS 101 Introduction to Global Studies - 4 Credits

II. Global Experience
(Global Studies faculty advisor must approve.)

Global experiences may include:

1. ***(Recommended)*** Study abroad (semester, faculty led short term, Fulbright or equivalent)
2. A globally-themed internship or work study on or off campus. (GLBS 485: Internship in Global Studies)
3. A globally-themed independent study, honors thesis or a project that " internationalizes the campus or community" (GLBS 450:Independent Study) (GLBS 450: Independent Study)

III. Second Language:

- Fourth-semester competency required (successful completion of GRMN/FREN/ SPAN/CHIN 202) or a score of 800+ on language placement exam with at least 8 credit hours of language instruction. In cases where a student's choice of language is only offered for one year (two semesters), consult with the Director of Global Studies for solutions.

IV. 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 150 World Politics - 4 Credits

V. 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. Off Campus Study

(Taken before semester of academic year study abroad.)

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

3. 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

2. History

- HIST 111 Modern Western History - 4 Credits
- HIST 120 The Ancient Mediterranean - 4 Credits
- HIST 130 Aztecs, Incas, and Conquistadors: Colonialism in the Americas - 4 Credits
- HIST 153 Modern Latin American History - 4 Credits
- HIST 223 German History into the 21st Century - 4 Credits
- HIST 232 African Kingdoms-Egypt-Kongo - 4 Credits
- HIST 300 Topics in History (upon approval) - 1 to 4 Credits
- HIST 310 The Ancient Greeks - 4 Credits
- HIST 311 The Roman World - 4 Credits
- HIST 321 The History of Fascism - 4 Credits
- HIST 330 Southern Africa: Between Mandela and Mugabe - 2 Credits
- HIST 340 Ukraine: Between Putin and the West - 2 Credits
- HIST 358 Modern China - 4 Credits
- HIST 363 Goths, Saxons, and Vikings: The Germanic Tribes from Roman Times to the Norman Conquest - 4 Credits
- HIST 388 Empire and Nation in Eastern Europe - 4 Credits

4. 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

5. Cultural Anthropology/Interdisciplinary Studies

- *ANTH 303 Health and Culture - 4 Credits
- *ANTH 304 Language and Culture - 4 Credits
- *ANTH 470 Field Work - 2 to 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

6. 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 to 4 Credits
- 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 Credits
- ARTH 466 Histories of Photography in the Non-Western World - 4 Credits
- COMM 200/300/400 Topics in Communication - 1 to 4 Credits
- 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 Credits
- *FREN 312 French Literature II - 4 Credits
- MUSC 211 World Music - 4 Credits
- SPAN 217 Exiled from Justice: Equatorial Guinean Writers in Africa and Spain - 4 Credits
- SPAN 218
- SPAN 220 Literatura Infantil y Juvenil - 4 Credits
- SPAN/WGST 215 Framing Gender: Latin Amer Film - 4 Credits
- SPAN/WGST 216 Cuba Close Up: Film since Revolution - 4 Credits
- *SPAN 311 Peninsular Culture and Literature I - 4 Credits
- *SPAN 312 Peninsular Culture and Literature II - 4 Credits
- *SPAN 315 Latin American Culture and Literature I - 4 Credits
- *SPAN 316 Latin American Culture and Literature II - 4 Credits
- *SPAN 400 Topics in Hispanic Literature - 1 to 4 Credits

*These courses have prerequisites; see course descriptions

7. Philosophy and Religion

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

Total credit hours 48-50

All courses used to complete the major must have grades of "C" or better.

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, and 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.

Requirements for the double major:

Requirements for the double major in Global Studies are the same as the requirements for the major, as listed above.

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 124 credit hours. All courses used to complete the major must have grades of "C" or better.

Business Foundation 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 Foundation Courses

- ATHT 105 Perspectives in the Health Professions - 3 Credits
- 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 - 3 Credits
- ATHT 393 Physiology of Exercise - 3 Credits
- ATHT 432 Organization and Administration of Athletics - 2 Credits
- ATHT 459 Research Methods in Athletic Training I - 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 307 Anatomy and Physiology: Nerves, Muscles, Skeleton - 4 Credits
- BIOL 308 Anatomy and Physiology: Viscera - 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.

History

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

A total of 34 credit hours in history is required. Of these hours, 26 must be drawn from the 300- or 400-level, including four hours of US history, four hours in the history of Latin America, and eight hours in history beyond the Americas. The following three history methods courses are required: HIST 304: Historian's Craft: The Past (2 hours), HIST 305: Historian's Craft: The Future (2 hours), and HIST 410: Writing History (4 hours).

All courses used to complete the major must have grades of "C" or better.

Requirements For The Double Major

Requirements for the double major in History are the same as the requirements for the major, as listed above.

What is a Double Major?

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.

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 the Assistant Dean 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, 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.

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.

All courses used to complete the major must have grades of "C" or better.

Core Classes:

Take all of the following:

- BIOL 150 Biological Foundations - 4 Credits
- CHEM 105 General Chemistry I - 3 Credits
- CHEM 105L General Chemistry I Laboratory - 1 Credit
- 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

Geology Electives

- 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 **And**
  CHEM 106L General Chemistry II Laboratory - 1 Credit
- PHYS 112 Introductory General Physics II - 4 Credits **Or**
  PHYS 126 Physics II - 4 Credits

Total mandatory depth credits: 8

Supporting field electives

- 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, 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 credit: 4

Take a minimum of 10 credits at 300 level or above.

- Choose from one of the disciplines represented or SCIE.

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 elective 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 credit: 4

Take one of the following; not duplicated in the core:

- BIOL 130 Introduction to Human Genetics - 4 Credits
- BIOL 211 Cell Biology - 4 Credits
- BIOL 307 Anatomy and Physiology: Nerves, Muscles, Skeleton - 4 Credits
- CHEM 106 General Chemistry II - 3 Credits **And**
  CHEM 106L General Chemistry II Laboratory - 1 Credit
- 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:

- A minimum of 10 credits of 300+ level courses from Engineering or one of the science fields (including SCIE).

Total credits: 54

Applied Sciences Track

Take all of the following:

- CHEM 106 General Chemistry II - 3 Credits **And**
  CHEM 106L General Chemistry II Laboratory - 1 Credit
- 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 the following:

- ENGR 101 Introduction to Engineering - 2 Credits
- ENGR 102 Computer Aided Design - 2 Credits
- ENGR 104 Computer Aided Engineering - 2 Credits
- ENGR 117 Engineering Foundations II - 2 Credits
- ENGR 117L

Total mandatory engineering breadth credits: 8

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
- RNEW 303 Software Engineering - 4 Credits
- RNEW 310 Fuel Cell Principles and Technology - 3 Credits

Or any courses with these subject codes: SCIE; CHEM; BIOL; PHYS; GEOL; OR ENVS 300+ for a minimum of 10 credits.

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 **And**
  CHEM 105L General Chemistry I Laboratory - 1 Credit
- CHEM 315 Organic Chemistry I - 3 Credits **And**
  CHEM 315L Laboratory-Organic Chem I - 1 Credit
- CHEM 316 Organic Chemistry II - 3 Credits **And**
  CHEM 316L Laboratory-Organic Chem II - 1 Credit

Total mandatory depth credits: 20

Take a combined minimum of 10 credits from the following:

- 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

* Topics courses must be approved.

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.

Total elective credit: 10

Total credits: 54

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.

Mathematics-B.A.

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

Requirements For The Double Major in Mathematics

The requirements for the double major in Mathematics are the same as the requirements for the BA in Mathematics major, as listed above.

What is a Double Major?

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

Mathematics B.S.

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
- MATH 391
- 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

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
- 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
- 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

All courses used to complete the major must have grades of "C" or better.

Requirements For The Double Major

The requirements for the double major in Philosophy are the same as the requirements for the major, as listed above.

What is a Double Major?

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)

Physics & Astrophysics

From the ancient study of the motion of stars and planets, through the revolutions of Copernicus, Galileo, Newton, Einstein and the founders of quantum mechanics, the fields of astronomy and physics continue to open the way for the quantitative study of the physical universe. These studies have shown the universe to be mathematically predictable and have resulted in opportunities for humanity to make effective use

of our surroundings and resources. The accuracy of the best physical theories is unprecedented in the history of science, and a host of technological innovations have grown out of the testing of those theories and out of their application by applied scientists and engineers.

At Alfred University, physics and astronomy go hand in hand, with a strong curriculum in the physical foundation of the universe and the remarkable facilities of the John L. Stull Observatory. We offer a full spectrum of courses, from introductory astronomy and physics, through intermediate courses in all of the main branches of physics and astronomy, up to advanced courses in cosmology and particle physics. Our division offers a variety of degree paths, including two bachelor of science programs in physics or astrophysics, a bachelor of arts in physics, and double majors in physics or astrophysics.

Astrophysics

Astronomy is the oldest of the natural sciences, and the first to have mathematics rigorously applied to it. Humans have always gazed at the night sky, identifying shapes and looking for patterns in the motion of those shapes. While the ancient civilizations developed mathematical models to predict the motion of celestial objects, it was the parallel development of physics and astronomy several centuries ago that allowed for mathematically accurate predictions of planetary motion and observational validation for the laws of physics. Developments over the last century in relativity and quantum mechanics and technological advancements in telescopes have solidified the field of astrophysics as a means of understanding the universe. We now know a great deal about how the physical universe works, from the subatomic scale to the largest astronomical and cosmological structures. Astrophysics allows us to test many aspects of those theories in ways that we could not possibly recreate in a laboratory.

The technologies required to build better telescopes, to put telescopes into orbit, and to detect gravitational waves have led to technological advances in many other fields as well, improving detection sensitivity and fabrication processes across a variety of engineering fields. And with the amount of data at unprecedented precision coming from the James Webb space Telescope and the GAIA Space Observatory, it is a very exciting time to be an astrophysicist.

To prepare them for the problems that they will encounter beyond Alfred University, the Division of Physics and Astronomy helps students to develop a strong theoretical foundation and also to engage in experimental and observational research opportunities. We work closely with our students and encourage them to come to us with questions about their classes, their future plans, and how those fit together. Our students collaborate with each other as they develop their problem solving skills, because the work of astrophysics is almost never done in isolation. Through sharing ideas and learning to explain things to each other, all of our students are better prepared for what their future holds.

The program offers a Bachelor of Science degree in astrophysics. This degree offers a deep focus in advanced and applied areas of physics and astronomy, including computation and independent research, making this degree excellent preparation for graduate study in astrophysics, astronomy, and physics or as a pathway toward scientific computing or research in industry. For students that have already chosen

a primary major but are also interested in a complete education in astrophysics, the program offers a double major in astrophysics. The details of the BS and the double major can be found below.

For students excited about astrophysics but interested in a broader path and more flexibility for pairing other interests with the problem solving skills of a physics degree, the division also offers a Bachelor of Arts degree in Physics with a Concentration in Astrophysics. This option is listed under the Physics Program.

Astrophysics BS

The requirements for the Bachelor of Science in astrophysics include a core of introductory, intermediate, and advanced courses in physics and astronomy and the completion of upper level electives in physics and astronomy and a research project as an independent study. Several related courses in mathematics and computer science are also required in preparation for the various core courses.

Core Requirements	42 Credits
Electives and Independent Study	8 Credits
Total Requirements	50 Credits

All courses used to complete the major must have grades of "C" or better.

Core Requirements for the major

Introductory and Intermediate Courses:

- PHYS 125 Physics I - 4 Credits
- PHYS 126 Physics II - 4 Credits
- PHYS 324 Mathematical Methods in Physics - 3 Credits
- PHYS 325 Elementary Optics - 3 Credits
- PHYS 326 Elementary Modern Physics - 3 Credits
- PHYS 327 Computational Physics - 3 Credits
- ASTR 307 Advanced Astronomy Laboratory - 2 Credits

Upper Level Courses

- ASTR 302 Planetary Science - 2 Credits
- ASTR 303 Stellar Astronomy - 3 Credits
- ASTR 304 Galactic Astronomy and Cosmology - 4 Credits
- PHYS 401 Quantum Mechanics I - 3 Credits
- PHYS 421 Statistical Mechanics - 4 Credits

- PHYS 423 Classical Mechanics - 4 Credits
- PHYS 424 Electricity and Magnetism I - 3 Credits

Electives and Independent Study:

- Physics and Astronomy courses at or above the 300 level - 6 Credits
- ASTR 450 Independent Study in Physics - 2 Credits

Related Courses

The following courses in mathematics and computer science fulfill the prerequisites of various courses required in the major. These courses should ideally be completed by the end of the second year.

- 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

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 and astronomy.
2. Use mathematical reasoning to apply the laws of physics to a range of astrophysical situations and identify the assumptions made in obtaining a solution.
3. Propose an independent research project to explore a testable question and carry out the observations or numerical simulations to determine the answer to that question.
4. Develop familiarity with the physics and astronomy literature and write up the results of their independent research in the form of a journal article.

Astrophysics Double Major

The requirements for the double major in astrophysics include a core of introductory, intermediate, and advanced courses in physics and the completion of upper level electives selected from the list of astronomy electives below. Several related courses in mathematics are also required in preparation for the various core courses.

Core Requirements	29-30 Credits
Electives	8 Credits
Total Requirements	37-38 Credits

All courses used to complete the double major must have grades of "C" or better. This double major may not be combined with the BA in physics, the BS in physics, or the BS in astrophysics due to extensive overlap.

Core Requirements for the major

Introductory and Intermediate Courses:

- PHYS 125 Physics I - 4 Credits
- PHYS 126 Physics II - 4 Credits
- PHYS 324 Mathematical Methods in Physics - 3 Credits
- PHYS 325 Elementary Optics - 3 Credits
- PHYS 326 Elementary Modern Physics - 3 Credits
- ASTR 307 Advanced Astronomy Laboratory - 2 Credits

Upper Level Courses: Choose 3 of the following 4 course

- PHYS 401 Quantum Mechanics I - 3 Credits
- PHYS 421 Statistical Mechanics - 4 Credits
- PHYS 423 Classical Mechanics - 4 Credits
- PHYS 424 Electricity and Magnetism I - 3 Credits

Electives: Complete a minimum of 8 credits from the list below:

- Astronomy courses at or above the 300 level not required above
- ASTR 302 Planetary Science - 2 Credits
- ASTR 303 Stellar Astronomy - 3 Credits
- ASTR 304 Galactic Astronomy and Cosmology - 4 Credits

Related Courses

The following courses in mathematics fulfill the prerequisites of various courses required in 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

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 and astronomy.
2. Use mathematical reasoning to apply the laws of physics to a range of astrophysical situations and identify the assumption made in obtaining a solution.

3. Ask a testable question and suggest realistic observations to determine the answer to that question.
4. Demonstrate familiarity with the physics and astronomy literature.

Physics

Physics is perhaps the most fundamental and most rigorously and quantitatively tested field of science. We know a great deal about how the physical universe works, from the subatomic scale to the largest astronomical and cosmological structures. Our current understanding has been shaped over the last four centuries and then revolutionized in the 20th century with the advent of relativity and quantum mechanics.

Our understanding of physics and its mathematical structures give us incredible predictive power, which allows other fields, especially the fields of engineering, to apply the results in clever and revolutionary ways. The developments that shape our modern world could only have been envisioned in the context of a deep understanding of the underlying laws of nature. Physicists work on both sides of this interface, developing and refining the laws and applying them to solve problems and create new technologies.

A degree in physics can prepare students to take up the enterprise of discovering new laws of physics and refining our understanding of existing laws. In learning the theories underlying physics, students also build strong skills in problem solving, mathematical analysis, and critical thinking. Complex problems can be daunting or even impossible to solve all at once, and one of the most important skills required in physics is the ability to prioritize the various aspects of the problem. This allows one to focus on understanding the most relevant aspect first and then refine and improve the theory by adding layers of complexity. This ability is extremely powerful in the solution of all kinds of complicated problems, not just in physics.

To prepare them for the problems that they will encounter beyond Alfred University, the Division of Physics and Astronomy helps students to develop a strong theoretical foundation and also to engage in experimental and research opportunities. We work closely with our students and encourage them to come to us with questions about their classes, their future plans, and how those fit together. Our students collaborate with each other as they develop their problem solving skills, because the work of physics is almost never done in isolation. Through sharing ideas and learning to explain things to each other, all of our students are better prepared for what their future holds.

The physics program offers two degree options: a Bachelor of Science (BS) and a Bachelor of Arts (BA). The BS offers a deeper focus with more coursework in advanced and applied areas of physics, including computation and independent research, making this degree excellent preparation for graduate study in physics or as a pathway toward scientific computing or research in industry. The BA allows for a broader path and more flexibility for pairing other interests with the problem solving skills of a physics degree, making this degree an excellent pathway to a variety of careers or to graduate study in other fields like engineering. For students that have already chosen a primary major but are also interested in a complete education in physics, the program offers a double major in physics. The details of the BS, the BA, and the double major can be found below.

Physics BS

The requirements for the Bachelor of Science in physics include a core of introductory, intermediate, and advanced courses in physics and the completion of upper level electives in physics and astronomy and a research project as an independent study. Several related courses in mathematics and computer science are also required in preparation for the various core courses.

Core Requirements	42 Credits
Electives	8 Credits
Total Requirements	50 Credits

All courses used to complete the major must have grades of "C" or better.

Core Requirements for the Major

Introductory and Intermediate Courses:

- PHYS 125 Physics I - 4 Credits
- PHYS 126 Physics II - 4 Credits
- PHYS 324 Mathematical Methods in Physics - 3 Credits
- PHYS 325 Elementary Optics - 3 Credits
- PHYS 326 Elementary Modern Physics - 3 Credits
- PHYS 327 Computational Physics - 3 Credits
- PHYS 341 Advanced Physics Laboratory - 2 Credits

Upper Level Courses:

- PHYS 401 Quantum Mechanics I - 3 Credits
- PHYS 402 Quantum Mechanics II - 3 Credits
- PHYS 421 Statistical Mechanics - 4 Credits
- PHYS 423 Classical Mechanics - 4 Credits
- PHYS 424 Electricity and Magnetism I - 3 Credits
- PHYS 454 Electricity and Magnetism II - 3 Credits

Electives and Independent Study:

- Physics and Astronomy courses at or above the 300 level - 6 Credits
- PHYS 450 Independent Study in Physics - 2 Credits

Related Courses

The following courses in mathematics and computer science fulfill the prerequisites of various courses required in the major. Most of these courses should ideally be completed by the end of the second year.

- 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 371 Linear Algebra - 4 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. Propose an independent research project to explore a testable question and carry out the experiments or numerical simulations to determine the answer to that question
4. Demonstrate familiarity with the physics literature and write up the results of their independent research in the form of a journal article.

Physics BA

The requirements for the Bachelor of Arts in physics 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	29 - 30 Credits
Concentration	8 Credits
Total Requirements	37 - 38 Credits

All courses used to complete the major must have grades of "C" or better.

Core Requirements for the major

Introductory and Intermediate Courses:

- PHYS 125 Physics I - 4 Credits
- PHYS 126 Physics II - 4 Credits
- PHYS 324 Mathematical Methods in Physics - 3 Credits
- PHYS 325 Elementary Optics - 3 Credits
- PHYS 326 Elementary Modern Physics - 3 Credits
- PHYS 341 Advanced Physics Laboratory - 2 Credits

Upper Level Courses: Choose 3 of the following 4 courses

- PHYS 401 Quantum Mechanics I - 3 Credits
- PHYS 421 Statistical Mechanics - 4 Credits
- PHYS 423 Classical Mechanics - 4 Credits
- PHYS 424 Electricity and Magnetism I - 3 Credits

Completing a Concentration

To ensure maximum flexibility in meeting student goals, five concentrations have been devised, well-suited to the mix of experience available at Alfred University. These concentrations leverage the interconnections between physics, astronomy, and several of our engineering programs. The concentrations are as follows:

Astrophysics

This concentration makes use of the University's considerable astronomy resources at the Stull Observatory. Complete at least 8 credits chosen from the following:

- ASTR 302 Planetary Science - 2 Credits
- ASTR 303 Stellar Astronomy - 3 Credits
- ASTR 304 Galactic Astronomy and Cosmology - 4 Credits
- ASTR 307 Advanced Astronomy Lab - 2 Credits

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 the BA in physics and a BS in Mechanical Engineering. Complete at least 8 credits chosen from the following:

- 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

Solid State Physics

This concentration take 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. Complete at least 8 credits chosen from the following:

- 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

Theoretical Physics

This concentration allows maximum depth in student's physics preparation. Complete at least 8 credits chosen from the following:

- PHYS 402 Quantum Mechanics II - 3 Credits
- PHYS 405 General Relativity - 4 Credits
- PHYS 410 Particle Physics - 4 Credits
- PHYS 454 Electricity and Magnetism II - 3 Credits

General Physics

- This concentration allows maximum breadth in student's physics preparation. Eight credits of electives are chosen from the courses in any of the other concentrations, with no more than 4 credits from any one concentration. 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 courses required in 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

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.

Physics Double Major

The requirements for the double major in physics include a core of introductory, intermediate, and advanced courses in physics and the completion of upper level electives selected from the list of physics, astronomy and engineering electives below. Several related courses in mathematics are also required in preparation for the various core courses.

Core Requirements	29 - 30 Credits
Electives	8 Credits
Total Requirements	37 - 38 Credits

All courses used to complete the double major must have grades of "C" or better. This double major may not be combined with the BA in physics, the BS in physics, or the BS in astrophysics due to extensive overlap.

Core Requirements for the major

Introductory and Intermediate Courses:

- PHYS 125 Physics I - 4 Credits
- PHYS 126 Physics II - 4 Credits
- PHYS 324 Mathematical Methods in Physics - 3 Credits
- PHYS 325 Elementary Optics - 3 Credits
- PHYS 326 Elementary Modern Physics - 3 Credits
- PHYS 341 Advanced Physics Laboratory - 2 Credits

Upper Level Courses: Choose 3 of the following 4 courses

- PHYS 401 Quantum Mechanics I - 3 Credits
- PHYs 421 Statistical Mechanics - 4 Credits
- PHYS 423 Classical Mechanics - 4 Credits
- PHYs 424 Electricity and Magnetism I - 3 Credits

Electives: Complete a minimum of 8 credits from the list below

- Physics course at or above the 300 level not required above
- Astronomy courses at or above the 300 level
- MECH 321 Thermodynamics II - 3 Credits
- MECH 324 Fluid Mechanics I - 3 Credits
- MECH 415 Mechanical Vibrations I - 3 Credits
- CEMS 344 Properties II: Electrical, Magnetic, and Optical - 4 Credits
- CEMS 347 Spectroscopy or CEMS 349 X-ray Characterization - 2 Credits
- CEMS 501 Solid State Physics - 3 Credits

Related Courses

The following courses in mathematics fulfill the prerequisites of various courses required in 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

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.

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.

All courses used to complete the major must have grades of "C" or better.

Requirements for Political Science Major

I. Core Courses (12 credit hours)

- POLS 110 American Politics - 4 Credits
- POLS 150 World Politics - 4 Credits
- POLS/SOCI 230 Introduction to Data Analysis & Statistics - 4 Credits

II. Core Subject Areas (12 credit hours)

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

American Politics (choose at least one course):

- *POLS 310 Executive Branch Institutions - 4 Credits
- POLS 313 State and Local Politics - 4 Credits
- *POLS 318 The Presidency - 4 Credits
- POLS 331 Parties and Elections - 4 Credits

Political Thought:

- POLS 341 Modern Political Theory - 4 Credits
- POLS 346
- *POLS/SOCI 420 Social Theory: A Survey - 4 Credits

Comparative and International Politics (choose at least one course):

- POLS 253 Dictatorship and Democracy - 4 Credits
- POLS/GLBS 351 European Politics - 4 Credits
- POLS/HIST 382 Latin American Politics - 4 Credits

III. Electives (12 credit hours)

Twelve additional credit hours in Political Science from core subject area courses and/or the following courses:

- POLS 200 Special Topics - 1 to 4 Credits
- POLS/ENVS/SOCI 214 Environment, Politics & Society - 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 332 Judicial Processes - 4 credits
- POLS 355 Public Policy - 4 Credits
- POLS/SJST/SOCI 356 Social Movements - 4 Credits
- POLS 373 Terrorism and International Security - 4 Credits
- POLS 400 Special Topics - 1 to 4 Credits
- *POLS/SOCI 431 Research Design & Strategies - 4 Credits
- POLS 450 Independent Study - 1 to 4 Credits
- POLS 470 Field Work - 2 to 4 Credits

Total credit hours 36

*These courses have prerequisites; see course descriptions.

Requirements For The Double Major

The requirements for the double major in Political Science are the same as the requirements for the major, as listed above.

What is a Double Major?

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

I. Core Courses (12 credit hours)

- POLS 110 American Politics - 4 Credits
- POLS 150 World Politics - 4 Credits
- POLS/SOCI 230 Introduction to Data Analysis & Statistics - 4 Credits

II. Core Subject Areas (8 credit hours)

At least one course from each of the following two groups:

American Politics:

- *POLS 310 Executive Branch Institutions - 4 Credits
- POLS 313 State and Local Politics - 4 Credits
- *POLS 318 The Presidency - 4 Credits
- POLS 331 Parties and Elections - 4 Credits

Political Thought (choose at least one course):

- POLS/PHIL/SJST 341 Modern Political Theory - 4 Credits
- * POLS/SJST 346 American Political Thought - 4 Credits
- * POLS/SOCI 420 Social Theory: A Survey - 4 Credits

III. Electives (8 credit hours)

Eight additional credit hours in Political Science from core subject area courses and/or the following courses:

- POLS 200 Special Topics - 1 to 4 Credits
- POLS/ENVS/SOCI 214 Environment, Politics & Society - 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 332 Judicial Processes - 4 Credits
- POLS 355 Public Policy - 4 Credits
- POLS/SJST/SOCI 356 Social 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 431 Research Design & Strategies - 4 Credits
- POLS 450 Independent Study - 1 to 4 Credits

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 (16 credit hours)

- HIST 110 The Making of Europe - 4 Credits
- HIST 111 Modern Western History - 4 Credits
- HIST 211 Early US History - 4 Credits
- HIST 212 Modern US History - 4 Credits

Total credit hours 52

*These courses have prerequisites; see course descriptions.

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 six 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.

The Equine Assisted Psychotherapy Concentration prepares students to incorporate horses into experiential therapies and be eligible for certification as an Equine Specialist Professional through the Equine Growth and Learning Association (EAGALA).

Art Therapy is an expressive therapy that uses creative art-making processes to improve someone's mental and emotional health. A Master's Degree is required for entry-level practice in Art Therapy.

Requirements for the major

Foundational Core (all Concentrations) (16 credit hours)

- PSYC 101 Introduction to Psychology - 4 Credits
- PSYC 221 Psychological Research Methods and Statistics I - 4 Credits
- PSYC 222 Psychological Research Methods and Statistics II - 4 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 (16 credit hours)

A. Biological (6 credit hours)

- PSYC 270 Fundamentals of Neuropsychology - 4 Credits
- PSYC 280 Applied Neuropsychology - 2 to 4 Credits

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)

- PSYC 118 Introduction to Adult Development and Aging - 4 Credits
- PSYC 261 Cognitive Development - 4 Credits
- PSYC 262 Social Development - 4 Credits
- PSYC 340 Adverse & Protective Childhood - 2 to 3 Credits

D. Social and Personality (Choose one)

- PSYC 273 Psychology of the African American Experience - 2 to 4 Credits
- 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)

- PSYC 210 Communication and Counseling Skills - 2 Credits
- PSYC 322 Health Psychology - 2 to 4 Credits
- PSYC 342 Psychopathology - 4 Credits
- PSYC 351 Human Sexuality - 4 Credits
- PSYC 371 The Psychology of Death and Dying - 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) 44

Clinical/Counseling Psychology Concentration

Foundational Core (16 credit hours)

A. Biological (6 credit hours)

- PSYC 270 Fundamentals of Neuropsychology - 4 Credits
- PSYC 280 Applied Neuropsychology - 2 to 4 Credits

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)

- PSYC 118 Introduction to Adult Development and Aging - 4 Credits
- PSYC 261 Cognitive Development - 4 Credits
- PSYC 262 Social Development - 4 Credits
- PSYC 340 Adverse & Protective Childhood - 2 to 3 Credits

D. Social and Personality (Choose one)

- PSYC 273 Psychology of the African American Experience - 2 to 4 Credits
- PSYC 341 Theories of Personality - 4 Credits
- PSYC 372 Psychology of Gender - 4 Credits

E. Mental and Physical Health (Fulfilled by concentration)

- PSYC 322 Health Psychology - 2 to 4 Credits
- PSYC 351 Human Sexuality - 4 Credits
- PSYC 371 The Psychology of Death and Dying - 4 Credits

Concentration specific: (Take all; 14 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) 48

Experimental Psychology Concentration

Foundational Core (16 credit hours)

A. Biological (6 credit hours)

- PSYC 270 Fundamentals of Neuropsychology - 4 Credits
- PSYC 280 Applied Neuropsychology - 2 to 4 Credits

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)

- PSYC 118 Introduction to Adult Development and Aging - 4 Credits
- PSYC 261 Cognitive Development - 4 Credits
- PSYC 262 Social Development - 4 Credits
- PSYC 340 Adverse & Protective Childhood - 2 to 3 Credits

D. Social and Personality (Choose one)

- PSYC 273 Psychology of the African American Experience - 2 to 4 Credits
- 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)

- PSYC 210 Communication and Counseling Skills - 2 Credits
- PSYC 322 Health Psychology - 2 to 4 Credits
- PSYC 342 Psychopathology - 4 Credits
- PSYC 351 Human Sexuality - 4 Credits
- PSYC 371 The Psychology of Death and Dying - 4 Credits
- PSYC 471 Child Psychopathology - 3 Credits

- PSYC 472 Child Interventions - 3 Credits

Concentration specific: (Take all; 8 credit hours)

- PSYC 411 Advanced Psychological Research Methods and Statistics - 4 Credits
- PSYC 412 Research Practicum - 4 Credits

Total credit hours required (minimum) 48

Child Psychology Concentration

Foundational Core (16 credit hours)

A. Biological (6 credit hours)

- PSYC 270 Fundamentals of Neuropsychology - 4 Credits
- PSYC 280 Applied Neuropsychology - 2 to 4 Credits

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)

- PSYC 261 Cognitive Development - 4 Credits
- PSYC 262 Social Development - 4 Credits

D. Social and Personality (Choose one)

- PSYC 273 Psychology of the African American Experience - 2 to 4 Credits
- 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)

- PSYC 210 Communication and Counseling Skills - 2 Credits
- PSYC 322 Health Psychology - 2 to 4 Credits
- PSYC 342 Psychopathology - 4 Credits
- PSYC 351 Human Sexuality - 4 Credits
- PSYC 371 The Psychology of Death and Dying - 4 Credits

Concentration Specific (11 cr.)

Take both of the following:

- PSYC 320 Parenting Seminar - 2 to 3 Credits
- PSYC 340 Adverse & Protective Childhood - 2 to 3 Credits

Complete one course from each of the following groupings:

- 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) 51

Industrial/Organizational Psychology Concentration

Foundational Core (16 credit hours)

A. Biological (6 credit hours)

- PSYC 270 Fundamentals of Neuropsychology - 4 Credits
- PSYC 280 Applied Neuropsychology - 2 to 4 Credits

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)

- PSYC 118 Introduction to Adult Development and Aging - 4 Credits

D. Social and Personality (4 credit hours)

- PSYC 282 Social Psychology - 4 Credits

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 351 Human Sexuality - 4 Credits
- PSYC 371 The Psychology of Death and Dying - 4 Credits

Concentration Specific (complete both)

- PSYC 302 Psychological Measurement - 2 to 4 Credits
- PSYC 362 Industrial/Organizational Psychology - 4 Credits

Complete 9 credit hours from the following:

- MGMT 305
- 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 379 Consumer Behavior - 3 Credits
- MKTG 382 Sales Marketing - 3 Credits
- MKTG 452 Market Research - 3 Credits

Total credit hours required (minimum) 50

NOTE: Take ACCT 211, ACCT 212, ECON 201, ECON 202, FIN 348 and 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.

Equine Assisted Psychotherapy

Foundational Core (16 credit hours)

A. Biological (6 cr.)

- PSYC 270 Fundamentals of Neuropsychology - 4 Credits
- PSYC 280 Applied Neuropsychology - 2 to 4 Credits

B. Learning & Cognitive Processes (4 cr.)

- PSYC 251 Principles of Learning and Behavior Modification - 4 Credits

C. Developmental (4 cr.)

- PSYC 261 Cognitive Development - 4 Credits
- PSYC 262 Social Development - 4 Credits
- PSYC 340 Adverse & Protective Childhood - 2 to 3 Credits

D. Social & Personality (Choose one)

- PSYC 273 Psychology of the African American Experience - 2 to 4 Credits
- PSYC 341 Theories of Personality - 4 Credits
- PSYC 372 Psychology of Gender - 4 Credits

E. Mental & Physical Health (6 cr.)

- PSYC 210 Communication and Counseling Skills - 2 Credits
- PSYC 342 Psychopathology - 4 Credits

Concentration Specific (23 cr.)

Take one of the following:

- PSYC 471 Child Psychopathology - 3 Credits
- PSYC 472 Child Interventions - 3 Credits

Complete all:

- PSYC 381 Animal-Assisted Therapy - 3 Credits
- PSYC 382 Equine-Assit. Psychotherapy - 3 Credits
- PSYC 491 Clinical Procedures - 4 Credits
- EQUS 102 English Riding: Level II - 2 Credits
- EQUS 203
- EQUS 205 Introduction to Equine Science - 4 Credits

Total credit hours required (minimum) 63

Pre-Art Therapy

Art Therapy is an expressive therapy that uses creative art-making processes to improve someone's mental and emotional health. A Master's Degree is required for entry-level practice in Art Therapy, but students can take coursework to prepare them for graduate study. The American Art Therapy Association (http://www.arttherapy.org) recommends that students planning to pursue graduate study in Art Therapy do the following:

- Complete a minimum of 18 credits hours of Studio Art work
- Prepare a portfolio of original art work demonstrating competence with art materials
- Complete a *minimum* of 12 credit hours in Psychology
    - PSYC 101 - Introduction to Psychology (4 cr)
    - PSYC 261 or 262 - Cognitive/Social Development (or other developmental course) (4 cr)
    - PSYC 342 - Psychopathology (4 cr.)
- In consultation with practicing art therapists, we *recommend* the following psychology courses:
    - PSYC 389 - Introduction to Art Therapy (3 cr.)
    - PSYC 210 - Communication & Counseling (2 cr.)
    - PSYC 251 – Learning & Behavior Modification (4 cr.)
    - PSYC 302 – Psychological Measurement (4 cr.)
    - PSYC 341 – Theories of Personality (4 cr.)
    - PSYC 491 – Clinical Procedures (4 cr.)
    - PSYC 492 – Clinical Practicum (4 cr.)

Psychology Double Major

Requirements for the Double Major

Each student completes a core of courses and selects a prescribed number of elective courses related to their personal and career interests. All courses taken as part of the

Psychology double major must be passed with a grade of C or better. Please refer to the concentration tabs above for the specific requirements of each concentration.

Summary of Requirements for the Double Major in Psychology
Foundation and Core Courses – 16 cr.
Pillar Courses – 20-22 cr.: Typically, one course from each category:

1. Biological
2. Learning & Cognitive Processes
3. Developmental
4. Social & Personality
5. Mental & Physical Health

Electives – 6-8 cr.
Total Credit Hours - 44

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 Cultural Anthropology - 4 Credits
- SOCI/POLS 230 Introduction to Data Analysis & Statistics - 4 Credits
- *SOCI/POLS 420 Social Theory: A Survey - 4 Credits
- *SOCI/POLS 431 Research Design and Strategies - 4 Credits

II. Electives (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, Religion, and Fandom - 4 Credits
- COMM/POLS/SOCI 237 - Media and Politics - 4 Credits
- *SOCI 242 Social Problems - 4 Credits
- *CRIM/SOCI 245 Crime & Society - 4 Credits
- SOCI/WGST 253 Social Welfare Institutions - 4 Credits
- SOCI 343 Race and Ethnicity - 4 Credits
- *CRIM/SJST/SOCI 344 Sociology of Deviance & Criminal Behavior - 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
- POLS/SJST/SOCI 356 Social Movements - 4 Credits
- SOCI 300/400 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
- ANTH 302 The Nacirema - 4 Credits
- *ANTH 303 Health and Culture - 4 Credits
- *ANTH 304 Language and Culture - 4 Credits

Total credit hours 36

* These courses have prerequisites; see course descriptions.

All courses used to complete the major must have grades of "C" or better.

Requirements For The Double Major

The requirements for the double major in Sociology are the same as the requirements for the major, as listed above.

What is a Double Major?

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.

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 Hispanic American Migrations - 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

All courses used to complete the major must have grades of "C" or better.

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

Requirements for the double major:

Requirements for the double major in Spanish are the same as the requirements for the major, as listed above.

Sports and Health Sciences

The Sports and Health Science major is designed to create a well-rounded experience for students interested in the broad field of healthcare, dealing specifically with physically active or athletic populations. It includes specialized courses targeting the injury care and management aspects of sports, health science, and performance enhancement. The program will allow students to gain a quality, tangible education in a growing field and learn practical skills. Their observations of work in the field will reinforce their knowledge and skills and provide a competitive advantage for employment or graduate program admissions.

The major serves as a pre-professional course of study for professions which include, but are not limited to, the following: athletic trainer, physical therapist, occupational therapist, physician assistant, worksite injury intervention specialist, orthopedic physician extender, EMT, massage therapist, performance enhancement specialist, chiropractor, and medical sales representative.

The Sports and Health Science major offers five concentration tracks that are designed to provide evidence-based knowledge and practical skill sets required for various healthcare professions. The interdisciplinary design of the concentration areas allows students to meet required pre-requisite courses to enroll in specialized and advanced allied healthcare graduate programs. The program design additionally allows flexibility for students to purse other areas of interest (academic minors or double majors), or to allow program completion in three years (transfers or ACEX students).

The pre-professional concentration areas (Rehabilitation Sciences, Pre-Athletic Training, and Pre-Physician Assistant) allow students to complete the most common admissions requirements for graduate programs in a 300-mile radius from Alfred. The

General and Performance Enhancement concentrations prepare students for a range of employment opportunities.

Major Requirements

Total Credits: 54

Sports and Health Sciences Core

Take all of the following:

- SPHS 101 Introduction to Sports and Health Sciences - 3 Credits
- SPHS 102 Medical Terminology - 2 Credits
- SPHS 103 Foundations of Sport Injury and Illness - 3 Credits
- SPHS 111 Emergency Care in Health and Human Performance - 3 Credits **Or** SPHS 231 EMT Basic I - 3 Credits
- SPHS 190 Principles of Strength Training and Reconditioning - 2 Credits
- SPHS 222 Nutrition for Health and Human Performance - 2 Credits
- SPHS 301 Clinical Experience in Sports Health and Sciences I - 2 Credits
- SPHS 392 Biomechanics - 3 Credits
- SPHS 393 Physiology of Exercise - 3 Credits
- SPHS 401 Clinical Experience in Sports Health and Sciences II - 1 to 2 Credits
- SPHS 459 Research Methods in Sports Health and Sciences - 2 Credits
- SPHS 470 Capstone in Sports and Health Sciences - 1 Credit

Related Courses

- BIOL 150 Biological Foundations - 4 Credits
- BIOL 211 Cell Biology - 4 Credits
- BIOL 307 Anatomy and Physiology: Nerves, Muscles, Skeleton - 4 Credits
- BIOL 308 Anatomy and Physiology: Viscera - 4 Credits
- CHEM 105 General Chemistry I - 3 Credits
- CHEM 105L General Chemistry I Laboratory - 1 Credit
- PHYS 111 Introductory General Physics I - 4 Credits
- PSYC 101 Introduction to Psychology - 4 Credits

General Sports and Health Sciences Concentration

The Sports and Health Sciences major with a General Concentration provides students with a comprehensive understanding of various aspects of sports science, exercise physiology, health promotion, and wellness. This program offers a flexible curriculum

that allows students to explore a wide range of topics within the field of sports and health, catering to diverse interests and career goals.

First Year

- SPHS 101 Intro to Sports & Health Science - 3 Credits
- SPHS 102 Medical Terminology - 2 Credits
- SPHS 103 Foundations in Sports Injuries - 3 Credits
- SPHS 222 Nutrition for HHP - 2 Credits
- BIOL 150 Biological Foundations - 4 Credits
- BIOL 211 Cell Biology - 4 Credits
- ENGL 101 Writing I - 4 Credits
- ENGL 102 Writing II - 4 Credits
- PSYC 101 Introduction to Psychology - 4 Credits
- UNIV 101 Common Ground - 1 Credit

- FYE/GE elective - 4 Credits

Total Credits: 35

Second Year

- SPHS 111 Emergency Care - 3 Credits **Or**
  SPSH 231 EMT Basic I - 3 Credits
- SPHS 392 Biomechanics - 3 Credits
- BIOL 307 Anatomy and Physiology: Nerves, Muscles, Skeleton - 4 Credits
- BIOL 308 Anatomy and Physiology: Viscera - 4 Credits
- SOCI 110 Introduction to Sociology - 4 Credits **Or**
  ANTH 110 Cultural Anthropology - 4 Credits

- (3) SPHS electives - 6-12 Credits
- GE elective (Lit.) - 4 Credits
- GE elective (The Arts) - 4 Credits

Total Credits: 34 - 38

Third Year

- SPHS 190 Principles of Strength Training & Reconditioning - 2 Credits
- SPHS 301 Clinical Experience in SPHS I - 1 Credit
- SPHS 393 Physiology of Exercise - 3 Credits
- CHEM 105 General Chemistry I - 3 Credits

- (2) Foreign Language requirements - 8 Credits
- Statistic requirement - 3-4 Credits
- (2) SPHS electives - 4-8 Credits

- GE elective (Hist. Studies) - 4 Credits

Total Credits: 29-34

Fourth Year

- SPHS 401 Clinical Experience in SPHS - 1-2 Credits
- SPHS 459 Research Methods in SPHS - 2 Credits
- SPHS 470 Capstone in SPHS - 1 Credit
- PHYS 111 Introductory General Physics I - 4 Credits

- Global Perspective requirement - 2-4 Credits
- GE elective (Philosophy) - 4 Credits
- SPHS elective - 2-4 Credits
- (3) Free electives - 10-12 Credits

Total Credits: 26-33

Performance Enhancement Concentration

The Sports and Health Sciences major with a concentration in Performance Enhancement provides students with a comprehensive understanding of the human body's structure and function to improve athletic performance and enhance physical fitness in the general and athletic populations through targeted strength training and conditioning programs. Upon graduation, students meet the requirements for various industry-recognized certifications to pursue various career paths in performance enhancement, such as strength and conditioning specialists, athletic performance coaches, or personal trainers.

First Year

- SPHS 101 Intro to Sports & Health Science - 3 Credits
- SPHS 102 Medical Terminology - 2 Credits
- SPHS 103 Foundations in Sports Injuries - 3 Credits
- SPHS 222 Nutrition for HHP - 2 Credits
- BIOL 150 Biological Foundations - 4 Credits
- BIOL 211 Cell Biology - 4 Credits
- ENGL 101 Writing I - 4 Credits
- ENGL 102 Writing II - 4 Credits
- PSYC 101 Introduction to Psychology - 4 Credits
- UNIV 101 Common Ground - 1 Credit

- FYE/GE elective - 4 Credits

Total Credits: 35

Second Year

- SPHS 111 Emergency Care in HHP - 3 Credits **Or**
  SPHS 231 EMT Basic I - 3 Credits
- SPHS 392 Biomechanics - 3 Credits
- BIOL 307 Anatomy and Physiology: Nerves, Muscles, Skeleton - 4 Credits
- BIOL 308 Anatomy and Physiology: Viscera - 4 Credits
- CHEM 105 General Chemistry I - 3 Credits
- SOCI 110 Introduction to Sociology - 4 Credits **Or**
  ANTH 110 Cultural Anthropology - 4 Credits

- (2) Free electives - 6-8 Credits
- GE elective (Lit.) - 4 Credits
- GE elective (The Arts) - 4 Credits

Total Credits: 34-36

Third Year

- SPHS 190 Principles of Strength & Reconditioning - 2 Credits
- SPHS 301 Clinical Experience in SPHS I - 1 Credit
- SPHS 320 Psychosocial Strategies in Sports - 2 Credits
- SPHS 350 Therapeutic Interventions - 4 Credits
- SPHS 393 Physiology of Exercise - 3 Credits
- SPHS 395 Strength Training & Reconditioning Techniques - 2 Credits
- HFMT 405 Program Design and Implementation in Health Fitness Management - 3 Credits
- PHYS 111 Introductory General Physics I - 4 Credits

- (2) Foreign Language requirements - 8 Credits
- Statistics requirement - 3-4 Credits

Total Credits: 32-33

Fourth Year

- SPHS 401 Clinical Experience in SPHS II - 1 Credit
- SPHS 459 Research Methods in SPHS - 2 Credits
- SPHS 470 Capstone in SPHS - 1 Credit
- ATHT 432 Organization and Administration of Athletics - 2 Credits
- HFMT 410 Exercise Prescription - 4 Credits
- HFMT 420 Special Populations and Health Appraisal - 2 Credits

- Global Perspective requirement - 2-4 Credits
- GE elective (Philosophy) - 4 Credits
- GE elective (Hist. Studies) - 4 Credits

- (2) Free electives - 7-8 Credits

Total Credits: 29-32

Rehabilitation Sciences Concentration

The Sports and Health Sciences major with a concentration in Rehabilitation Sciences provides students with a comprehensive understanding of human movement, injury prevention, and rehabilitation techniques. This concentration provides the framework for students to successfully complete the prerequisite coursework typically required for graduate program admissions in physical or occupational therapy.

First Year

- SPHS 101 Intro to Sports & Health Sciences - 3 Credits
- SPHS 102 Medical Terminology - 2 Credits
- SPHS 103 Foundations in Sports Injuries - 3 Credits
- SPHS 222 Nutrition for HHP - 2 Credits
- BIOL 150 Biological Foundations - 4 Credits
- BIOL 211 Cell Biology - 4 Credits
- ENGL 101 Writing I - 4 Credits
- ENGL 102 Writing II - 4 Credits
- PSYC 101 Introduction to Psychology - 4 Credits
- UNIV 101 Common Ground - 1 Credit

- FYE/GE elective - 4 Credits

Total Credits: 35

Second Year

- SPHS 111 Emergency Care in HHP - 3 Credits **Or**
  SPHS 231 EMT Basic I - 3 Credits
- SPHS 211 Orthopedic Assessment I - 4 Credits
- SPHS 212 Orthopedic Assessment II - 4 Credits
- SPHS 392 Biomechanics - 3 Credits
- BIOL 307 Anatomy and Physiology: Nerves, Muscles, Skeleton - 4 Credits
- BIOL 308 Anatomy and Physiology: Viscera - 4 Credits
- CHEM 105 General Chemistry I - 3 Credits
- CHEM 106 General Chemistry II - 3 Credits

- (2) Free electives - 4-5 Credits

Total Credits: 34-35

Third Year

- SPHS 190 Principles of Strength & Reconditioning - 2 Credits
- SPHS 301 Clinical Experiences in SPHS I - 1 Credit
- SPHS 350 Therapeutic Interventions - 4 Credits
- SPHS 393 Physiology of Exercise - 3 Credits
- BIOL 212 Principles of Genetics - 4 Credits **Or**
  BIOL 213 Structure and Function of Organisms - 4 Credits

- (2) Foreign Language requirements - 8 Credits
- Statistics requirement - 3-4 Credits
- GE elective (The Arts) - 4 Credits
- GE elective (Philosophy) - 4 Credits

Total Credits: 33-34

Fourth Year

- SPHS 401 Clinical Experiences in SPHS II - 1 Credit
- SPHS 459 Research Methods in SPHS - 2 Credits
- SPHS 470 Capstone in SPHS - 1 Credit
- PHYS 111 Introductory General Physics I - 4 Credits
- PHYS 112 Introductory General Physics II - 4 Credits
- SOCI 110 Introduction to Sociology - 4 Credits **Or**
  PSYC 118 Introduction to Adult Development and Aging - 4 Credits **Or**
  PSYC 342 Psychopathology - 4 Credits
- SOCI 110 Introduction to Sociology - 4 Credits **Or**
  ANTH 110 Cultural Anthropology - 4 Credits

- Global Perspective requirement - 2-4 Credits
- GE elective (Hist. Studies) - 4 Credits
- GE elective (Lit.) - 4 Credits

Total Credits: 30-32

Pre-Athletic Training Concentration

The Sports and Health Sciences major’s Pre-Athletic Training concentration provides students with a comprehensive understanding of injury prevention, evaluation, and rehabilitation in athletic settings. This concentration provides the framework for students to successfully complete the prerequisite coursework typically required for graduate program admissions in athletic training.

First Year

- SPHS 101 Intro to Sports & Health Sciences - 3 Credits

- SPHS 102 Medical Terminology - 2 Credits
- SPHS 103 Foundations in Sports Injuries - 3 Credits
- SPHS 222 Nutrition for HHP - 2 Credits
- BIOL 150 Biological Foundations - 4 Credits
- BIOL 211 Cell Biology - 4 Credits
- ENGL 101 Writing I - 4 Credits
- ENGL 102 Writing II - 4 Credits
- PSYC 101 Introduction to Psychology - 4 Credits
- UNIV 101 Common Ground - 1 Credit

- FYE/GE elective - 4 Credits

Total Credits: 35

Second Year

- SPHS 111 Emergency Care in HHP - 3 Credits **Or**
  SPHS 231 EMT Basic I - 3 Credits
- SPHS 211 Orthopedic Assessment I - 4 Credits
- SPHS 212 Orthopedic Assessment II - 4 Credits
- SPHS 303 P&C Strategies of Sport Injury & Illness - 2 Credits
- SPHS 392 Biomechanics - 3 Credits
- BIOL 307 Anatomy and Physiology: Nerves, Muscles, Skeleton - 4 Credits
- BIOL 308 Anatomy and Physiology: Viscera - 4 Credits
- SOCI 110 Introduction to Sociology - 4 Credits **Or**
  ANTH 110 Cultural Anthropology - 4 Credits

- Free elective - 3-4 Credits

Total Credits: 31-32

Third Year

- SPHS 190 Principles of Strength & Reconditioning - 2 Credits
- SPHS 301 Clinical Experiences in SPHS I - 1 Credit
- SPHS 350 Therapeutic Interventions - 4 Credits
- SPHS 393 Physiology of Exercise - 3 Credits
- SPHS 395 Strength Training & Reconditioning Techniques - 2 Credits
- CHEM 105 General Chemistry I - 3 Credits

- (2) Foreign Language requirements - 8 Credits
- Statistics requirement - 3-4 Credits
- GE elective (The Arts) - 4 Credits
- Free elective - 2 Credits

Total Credits: 33-34

Fourth Year

- SPHS 401 Clinical Experiences in SPHS II - 1 Credit
- SPHS 410 Medical & Pharmacological Aspects - 3 Credits
- SPHS 459 Research Methods in SPHS - 2 Credits
- SPHS 470 Capstone in SPHS - 1 Credit
- PHYS 111 Introductory General Physics I - 4 Credits

- Global Perspective requirement - 2-4 Credits
- GE elective (Hist. Studies) - 4 Credits
- GE elective (Lit.) - 4 Credits
- GE elective (Philosophy) - 4 Credits
- Free elective - 4 Credits

Total Credits: 29-31

Pre-Physician Assistant Concentration

The Sports and Health Sciences major's Pre-Physician Assistant concentration provides students with a comprehensive understanding of injury recognition, assessment techniques, and plans of care for the physically active and athletic populations. This concentration provides the framework for students to successfully complete the prerequisite coursework typically required for graduate program admissions in physician assistant studies.

First Year

- SPHS 101 Intro to Sports & Health Sciences - 3 Credits
- SPHS 102 Medical Terminology - 2 Credits
- SPHS 103 Foundations in Sports Injuries - 3 Credits
- SPHS 222 Nutrition for HHP - 2 Credits
- BIOL 150 Biological Foundations - 4 Credits
- BIOL 211 Cell Biology - 4 Credits
- ENGL 101 Writing I - 4 Credits
- ENGL 102 Writing II - 4 Credits
- PSYC 101 Introduction to Psychology - 4 Credits
- UNIV 101 Common Ground - 1 Credit

- FYE/GE elective - 4 Credits

Total Credits: 35

Second Year

- SPHS 231 EMT Basic I - 3 Credits
- SPHS 232 EMT Basic II - 3 Credits

- SPHS 392 Biomechanics - 3 Credits
- BIOL 212 Principles of Genetics - 4 Credits **Or**
  BIOL 213 Structure and Function of Organisms - 4 Credits
- BIOL 307 Anatomy and Physiology: Nerves, Muscles, Skeleton - 4 Credits
- BIOL 308 Anatomy and Physiology: Viscera - 4 Credits
- CHEM 105 General Chemistry I - 3 Credits
- CHEM 106 General Chemistry II - 3 Credits

- GE elective (The Arts) - 4 Credits

Total Credits: 33

Third Year

- SPHS 190 Principles of Strength & Reconditioning - 2 Credits
- SPHS 301 Clinical Experience in SPHS I - 1 Credit
- SPHS 393 Physiology of Exercise - 3 Credits
- CHEM 315 Organic Chemistry I - 3 Credits **Or**
  CHEM 310 Basic Organic Chemistry - 3 Credits **And**
  CHEM 315L Laboratory-Organic Chem I - 1 Credit
- SOCI 110 Introduction to Sociology - 4 Credits **Or**
  ANTH 110 Cultural Anthropology - 4 Credits

- (2) Foreign Language requirements - 8 Credits
- Statistics requirement - 3-4 Credits
- GE elective (Hist. Studies) - 4 Credits
- GE elective (Philosophy) - 4 Credits
- Free elective - 2-3 Credits

Total Credits: 35-37

Fourth Year

- SPHS 401 Clinical Experience in SPHS II - 1 Credit
- SPHS 459 Research Methods in SPHS - 2 Credits
- SPHS 470 Capstone in SPHS - 1 Credit
- BIOL 302 General Microbiology - 4 Credits
- PHYS 111 Introductory General Physics I - 4 Credits
- BIOL 420 Biochemistry: Proteins and Metabolism - 4 Credits **Or**
  Free elective - 4 Credits
- BIOL 422 Biochemistry: Nucleic Acids - 4 Credits **Or**
  Free elective - 4 Credits
- SOCI 110 Introduction to Sociology - 4 Credits **Or**
  PSYC 118 Introduction to Adult Development and Aging - 4 Credits **Or**
  PSYC 342 Psychopathology - 4 Credits

- Global Perspective requirement - 2-4 Credits

- GE elective (Lit.) - 4 Credits

Total Credits: 30-32

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 their 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. Additional courses may be approved by the director each semester. See the website and/or contact the director for a list of courses.

Requirements for the Africana Studies Minor

Students must take at least one* of the following:

- * PSYC 300 Special Topics: - 1 to 4 Credits
- HIST 232 African Kingdoms - Egypt-Kongo - 4 Credits
- HIST 235 African American History since 1863 - 4 Credits

* Topics title offered this catalog year: Psychology of the African American Experience

*Students can take all three; 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:

- DANC 200 African Dance - 2 Credits
- DANC 225 Hip Hop - 2 Credits
- 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 300 Southern Africa between Mandela and Mugabe - 2 Credits
- HIST 377
- 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
- SOCI/WGST/SJST 300 Race and Reproduction
- FREN/GLBS 300 Le Monde Francophone

Total credit hours 18

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.

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 Classical World Theatre: History, Art, Politics & Society - 4 Credits
- THEA 200/300/400 Topics in Theatre (consult advisor) - 1 to 4 Credits

Section B-Applied and Studio Skills Courses

- ART 111 Drawing for Non-Art Majors - 4 Credits
- ART 121 Sculpture for Non-Majors - 4 Credits
- ART 133 Photography for Non-Majors - 4 Credits
- ART 151 Ceramics for Non-Majors - 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 Playmaking: From Writing to Devising For the New Era - 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
- PDAT 120 Technical Theatre - 4 Credits
- PDAT 220 Design Fundamentals for Stage, Dance and Film - 4 Credits
- PDAT 270 Play Production - 2 Credits
- THEA 200/300/400 Topics (consult with advisor) - 1 to 4 Credits

Total credit hours 25-29

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.

Astronomy

Students may take a variety of courses to become acquainted with modern astronomical thought and observational technique. One may prepare for graduate study in astronomy or astrophysics by completing a Physics major and electing additional 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 Advanced Astronomy Lab- 2 credits

Total credit hours 13

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

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.

Biological 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.

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

I. Core Courses (8 credit hours)

- ANTH 120 Human Origins - 4 credits
- BIOL 130 Introduction to Human Genetics - 4 Credits

II. Electives (12 credit hours)

- ANTH 300 Special Topics - 1 to 4 Credits
- *ANTH 303 Health & Culture - 4 Credits
- ANTH/BIOL 305 Belize and the Caribbean - 4 credits
- *BIOL 348 Animal Behavior - 4 credits
- *BIOL 375 Comparative Vertebrate Biology - 4 credits
- *BIOL 415 Genetics and Evolution of Populations - 4 Credits
- PSYC 270 Fundamentals of Neuropsychology - 4 Credits
- PSYC 351 Human Sexuality - 4 Credits
- *SOCI 235 Socialization - 4 credits

Total credit hours 20

*These courses have prerequisites; see course descriptions.

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.

Biology

Requirements for the Biology minor

A total of 24 credits is required for the Biology minor.

A. Take one of the following:

- BIOL 150 Biological Foundations - 4 Credits
- BIOL 155 Biological Foundations: Research Project - 4 Credits

B. Take CHEM 105/105L:

- CHEM 105 General Chemistry I - 3 Credits
- CHEM 105L General Chemistry I Laboratory - 1 Credit

C. Complete 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

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.

Preparation for Middle/Adolescent Education Minor

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

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. Core Courses (14 cr.)

- BIOL 211 Cell Biology - 4 Credits
- BIOL 307 Anatomy and Physiology: Nerves, Muscles, Skeleton - 4 Credits
- PSYC 270 Fundamentals of Neuropsychology - 4 Credits
- PSYC 280 Applied Neuropsychology - 2 to 4 Credits

B. Complete one of the following:

- BIOL 130 Introduction to Human Genetics - 4 Credits
- BIOL 212 Principles of Genetics - 4 Credits

C. Complete one of the following:

- PSYC 311 Sensation and Perception - 4 Credits
- PSYC 322 Health Psychology - 2 to 4 Credits

D. 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 26

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.

Chemistry

- 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 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 334, CEMS 347, CEMS 349, PHYS 401, PHYS 421, MECH 320, MECH 321, MECH 241, RNEW 310

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.

Coaching

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.

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.

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.

Communication Studies

Requirements For The Minor

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

Total credit hours 24

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.

Computer Science

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
- 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

Criminal Justice Studies

Requirements for the Criminal Justice Studies minor

I. Core Courses (12 credit hours)

- SJST/SOCI 110 Introduction to Sociology - 4 Credits
- *CRIM/SOCI 245 Crime & Society - 4 Credits
- *CRIM/SJST 340 Concepts of Penology - 4 Credits

II. Electives (8 credit hours)

- *CRIM/SJST/SOCI 344 Sociology of Deviance & Criminal Behavior - 4 Credits
- *CRIM 351 Seminar in Criminal Behavior - 4 credits
- POLS 332 Judicial Processes - 4 Credits
- POLS 313 State and Local Politics - 4 Credits
- SOCI 242 Social Problems - 4 Credits
- SOCI 253 Social Welfare Institutions - 4 Credits
- *SJST/SOCI 355 Power, Privilege, and & Inequality - 4 Credits

*These courses have prerequisites; see course descriptions.

Total credit hours 20

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.

Cultural 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.

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

I. Core Course (4 credit hours)

- ANTH 110 Cultural Anthropology - 4 Credits

II. Electives (12 credit hours)

- ANTH 120 Human Origins - 4 credit hours
- ANTH 200/300 Special Topics - 1 to 4 Credits
- ANTH 240 Cultures through Film - 4 credit hours
- *ANTH 302 The Nacirema - 4 credit hours
- *ANTH 303 Health and Culture - 4 Credits
- *ANTH 304 Language and Culture - 4 credit hours
- *ANTH 450
- *ANTH 470 Field Work - 2 or 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.

Data Science

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

- **Adolescent 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 Adolescent Education combines an academic major in a particular field, such as English or Biology, with an Adolescent minor in the Division of Education. Adolescent 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 Adolescent 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 and in the Visual Arts minor program in the College of Liberal Arts and Sciences.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.

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.

Prerequisite Courses

- EDUC 230 Psychological Foundations of Education - 3 Credits
- EDUC 231 Social Foundations of Education - 3 Credits
- SPED 456 Human Development: Exceptionality - 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
- EDUC 405 Literacy in the Content Area - 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

As the Visual Arts Minor is within the College of Liberal Arts & Sciences, these students are also required to take 1 semester of a World Language and 1 semester of Science.

This minor requires an additional semester after the traditional 8 semesters for students to complete their student teaching.

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:

- Content Specialty Test (CST)
  - The appropriate Content Specialty Test(s) for the appropriate developmental level(s) and certification area(s)
  - Must pass before applying for a teaching certificate
- Educating All Students (EAS)
  - Must pass before applying for a teaching certificate
- auTPA:
  - Completed during the student teaching semester
  - Must pass 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 (SAVE), and Training in Harassment, Bullying, Cyberbullying, and Discrimination in Schools: Prevention and Intervention (DASA). The SAVE workshop is provided within EDUC 231 every semester and the DASA workshop is offered online every semester. The Child Abuse Identification and Reporting class is not offered for undergraduates at AU, but it can be taken online through NYSED.

Fingerprinting/Background Check:

NYS requires candidates applying for Initial (first) certification to complete a fingerprinting/background check. Students will need to have fingerprinting completed for the Practicum/Fieldwork semester in order to comply with school district policies. Fingerprinting information can be obtained from the Division of Education office.

English

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.

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

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.

Environmental Studies

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

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.

Equestrian Studies

Students can combine a major from any division of the University with a minor in Equestrian Studies or Equine Business Management in order to meet their own personal goals and vision.

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.

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
- 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 to 4 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 Introduction to Dressage - 2 Credits
- 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 Dressage II - 2 Credits
- EQUS 118 Advanced Horsemanship - 2 Credits
- EQUS 120 Driving I - 2 Credits
- EQUS 121 Driving II - 2 Credits
- EQUS 122 Driving III - 2 Credits

Total Credit Hours 16

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.

Exercise Science

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.

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 - 3 Credits
- BIOL 307 Anatomy and Physiology: Nerves, Muscles, Skeleton - 4 Credits
- BIOL 308 Anatomy and Physiology: Viscera - 4 Credits

Total Credit Hours 27

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.

Film Studies

Requirements For The Minor

- COMM 215 Introduction to Film Studies - 4 Credits
- COMM 304 History of the Motion Picture - 4 Credits

Select 12 credits of electives

Select 12 credits of electives in consultation with advisor. Upper-level courses (300- and 400-level) preferred.

- ANTH 240 Culture Through Films (4 Credits)
- ARTH 373/573 Materiality in Experimental Film and Video Art (4 Credits)
- COMM 216 Video Production (4 Credits)
- * COMM 300/400 Special Topics in Film Studies (1 to 4 Credits)
- COMM 426 Screenwriting (4 Credits)
- ENGL 225 Shakespeare and Cinema (2 or 4 Credits)
- MUSC 214 Reel Music in America (4 Credits)

* Recent Special Topics in Film Studies include The Global Horror Film, The Birth of the Movies, Journalism and the Movies, International Film, Film Noir, and Cult Movies

Total credit hours 20

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.

French

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

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.

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

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

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 required (minimum) 20

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.

Global Studies

Requirements for Global Studies Minor

I. Foundation Courses (required)

Second Languages: First year competency required.

- 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 150 World Politics - 4 Credits

Eight additional credits at the 300 or 400 level from the Global Studies electives, or 300 or 400 level Global Perspective (GP) attributed courses.

Study Abroad: at least one semester recommended.

Total credit hours 20

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.

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

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.

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

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.

Mathematics

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

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.

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.

Physics

- 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.

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.

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 Advanced Astronomy Lab - 2 credits
- GEOL 101 This Dynamic Earth - 4 Credits
- GEOL 201 Surficial Geology - 4 Credits
- GEOL 408 Tectonics - 4 Credits

Total Credit Hours 14

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

Political Science

Requirements for the minor in Political Science

- POLS 110 American Politics - 4 Credits
- POLS 150 World Politics - 4 Credits

Plus twelve additional hours in Political Science

Total credit hours 20

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.

Psychology

Requirements for the minor in Psychology

A. Foundational Core (take all; 8 credit hours)

- PSYC 101 Introduction to Psychology - 4 Credits
- PSYC 221 Psychological Research Methods and Statistics I - 4 Credits

B. Biological, Learning and Cognitive Processes (4 credit hours)

- PSYC 251 Principles of Learning and Behavior Modification - 4 Credits
- PSYC 270 Fundamentals of Neuropsychology - 4 Credits

- PSYC 280 Applied Neuropsychology - 2 to 4 Credits
- PSYC 311 Sensation and Perception - 4 Credits
- PSYC 332 Cognitive Processes - 4 Credits
- PSYC 429 Cognition and Aging - 2 Credits

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
- PSYC 340 Adverse & Protective Childhood - 2 to 3 Credits

D. Social and Personality (Choose one)

- PSYC 273 Psychology of the African American Experience - 2 to 4 Credits
- 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)

- PSYC 210 Communication and Counseling Skills - 2 Credits
- PSYC 322 Health Psychology - 2 to 4 Credits
- PSYC 342 Psychopathology - 4 Credits
- PSYC 351 Human Sexuality - 4 Credits
- PSYC 371 The Psychology of Death and Dying - 4 Credits
- PSYC 471 Child Psychopathology - 3 Credits
- PSYC 472 Child Interventions - 3 Credits

Total credit hours required (minimum) 24

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.

Public Law

Requirements for the minor in Public Law

- POLS 110 American Politics - 4 Credits
- *POLS/SJST 316 American Constitutional Law & Politics - 4 Credits
- POLS 332 Judicial Processes - 4 Credits

Plus one course from the following:

- POLS 242 Approaches to Law - 4 Credits
- POLS 313 State and Local Politics - 4 Credits
- *CRIM/SOCI 245 Crime & Society - 4 Credits

Total credit hours 16

*These courses have prerequisites; see course descriptions.

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.

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.

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.

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 310 Executive Branch Institutions - 4 Credits
- POLS 355 Public Policy - 4 Credits
- *Experiential Capstone Project - 2 or 4 Credits

* To be determined under advisement

Total Credit Hours 14-16

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.

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 an 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 - 1 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: (Most are cross-listed as “SJST” in Class Schedules)

- ART 294
- ARTH 382 **Or**
  WGST 382 Gender and Art History: Feminist Art in a Global Frame - 4 Credits
- BIOL 150 Biological Foundations - 4 Credits
- COMM 465 Gender, Race, Class and Media - 4 Credits **Or**
  WGST 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 **Or**
  WGST 254 Women Writers - 2 or 4 Credits
- ENGL 256 Multicultural American Literature - 4 Credits **Or**
  WGST 256 Multicultural American Literature - 4 Credits
- ENGL 434 African-American Literature - 4 Credits
- GERO 118 Introduction to Adult Development and Aging - 4 Credits **Or**
  PSYC 118 Introduction to Adult Development and Aging - 4 Credits
- HIST 307 Post-World War II America - 4 Credits
- MUSC 216
- PHIL 304 **Or**
  POLS 304
- POLS 242 Approaches to Law - 4 Credits
- POLS 316 American Constitutional Law and Politics - 4 Credits
- POLS 341 Modern Political Theory - 4 Credits **Or**
  PHIL 341 Modern Political Theory - 4 Credits
- POLS 346
- PSYC 282 Social Psychology - 4 Credits
- PSYC 372 Psychology of Gender - 4 Credits **Or**
  WGST 372 Psychology of Gender - 4 Credits
- SOCI 110 Introduction to Sociology - 4 Credits
- SOCI 344 Sociology of Deviance & Criminal Behavior - 4 Credits
- SOCI 346 Sociology of Sex and Gender - 4 Credits **Or**

WGST 346 Sociology of Sex and Gender - 4 Credits
- SOCI 349 Sociology of Health, Illness & Dis/ability - 4 Credits
- SOCI 355 Power, Privilege, and Inequality - 4 Credits
- SOCI 356 Social Movements - 4 Credits **Or**
  POLS 356 Social Movements - 4 Credits
- SPAN 213 **Or**
  GLBS 213
- 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
- WGST 101 Women and Gender in Society - 4 Credits

Other classes may be included in the minor with permission from the Director or board, and some special topics courses are included, listed below.

- ART / SJST 200 Topics: Constructing Culture - 2 Credits
- ART / SJST 200 Topics: Activism & Theory in Art/Design - 2 Credits
- ART / SJST 300 Topics: Design for Social Justice - 4 Credits
- ARTH / SJST 300 Topics: Monuments & Memory - 4 Credits
- COMM / SJST 300 Topics: Public Communication and Civic Engagement - 4 Credits
- CRIM / SOCI / SJST 200 Topics: Justice in Policing - 2 Credits
- ENGL 461 / WGST / SJST 400 Topics: Girl Power in American Literature - 4 Credits
- ENGL 461 / SJST 400 Topics: The 99% Social Class in American Literature - 4 Credits
- FREN / WGST / SJST 300 Topics: Femmes et la Justice Social - 4 Credits
- HIST 360 / SJST 300 Topics: Black History in the U.S. Since 1877 - 4 Credits
- HIST / WGST / SJST 360 Topics: Sex, Power & Politics - 4 Credits
- PHIL / SJST 300 Topics: Comedy, Social Justice, and Censorship - 4 Credits
- PHIL / SJST / WGST 300: Topics: Feminist Philosophy - 2 Credits
- SOCI / WGST / SJST 300 Topics: Race and Reproduction - 4 Credits
- THEA / SJST 200 Topics: Performance Lab - 4 Credits
- UNIV / SJST 100 Topics: Artists and Activists of the Harlem Renaissance - 2 Credits
- UNIV / SJST 100 Topics: Enacting Social Justice through Pop Culture - 2 Credits

Total credit hours required 20-22

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.

Sociology

Requirements for the minor in Sociology

- SOCI/SJST 110 Introduction to Sociology - 4 credits
- *SOCI/POLS 420 Social Theory: A Survey - 4 Credits
- *SOCI/POLS 431 Research Design and Strategies - 4 Credits

Eight additional credit hours of sociology courses

* These courses have prerequisites; see course descriptions.

Total credit hours 20

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.

Spanish

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

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.

Sports Management

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.

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

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.

Women's and Gender Studies

The Women's and Gender Studies Minor offers students the opportunity to pursue interdisciplinary studies by combining course work from a variety of traditional disciplines with courses specifically designed for the minor.

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.

Requirements for the minor

Required Courses

- SJST/WGST 201/101 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).

Various Special Topics courses covering a wide array of unique content are offered each semester.

I: Humanities

Communication Studies

- WGST 412

English

- ENGL/SJST/WGST 254 Women Writers - 2 or 4 Credits
- ENGL/SJST/WGST 256 Multicultural American Literature - 4 Credits
- * WGST 300 Special Topics - 1 to 4 Credits
- ** WGST 400 Special Topics - 1 to 4 Credits
- WGST 481 International Women Writers - 4 Credits (also satisfies Global Perspective)

* Recent topics: "Scribbling Women"
** Recent topics: "Major Figures" such as: Faulkner/Morrison; Jane Austen; Virginia Woolf; and Joyce/Woolf.

History

- *** WGST 300 Special Topics - 1 to 4 Credits
- WGST 360 Sex, Power and Politics – 4 credits

*** Recent topics: "Women’s History" and "French Women Writers"

Modern Languages

- FREN/WGST 208 Francophone Queer Voices - 4 Credits

Religion

- WGST 200 Special Topics - 1 to 4 Credits

II: Social Sciences

Political Science

- MGMT/WGST 305 Gender and Organizations - 3 Credits

Psychology

- PSYC/WGST 320 Parenting Seminar - 2 Credits
- PSYC/WGST 351 Human Sexuality - 4 Credits
- PSYC/SJST/WGST 372 Psychology of Gender - 4 Credits

Sociology

- SOCI/WGST 253 Social Welfare Institutions - 4 Credits
- SOCI/SJST/WGST 346 Sociology of Sex and Gender - 4 Credits
- SOCI/WGST 348 Sociology of Families - 4 Credits
- SOCI/WGST 349 Sociology of Health, Illness & Dis/ability - 4 Credits

III: Fine and Performing Arts

Fine Arts

- **** WGST 300 Special Topics - 1 to 4 Credits
- ARTH/SJST/WGST 382 Gender and Art History: Feminist Art in a Global Frame - 4 Credits

Performing Arts

- WGST 217

Leadership

- WGST 201 Gender and Leadership - 2 Credits
- WGST 475 Women's Leadership Academy Practicum - 2 Credits

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.

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

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.

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.

Student Learning Outcomes:

Content Knowledge

1. Apply the principles and practices/skills of a professional artist/designer.
2. Understand the world through study of international historic and contemporary art.

Critical Thinking

1. Integrate knowledge critically and analytically.
2. Observe, analyze, and explain motivation for and intent of an individual's work.

Communication

1. Communicating proficiently in writing, and orally.
2. Create a professional portfolio.

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 MAJOR COURSES (66 credit hours)

- MUSC 101-108 Private Lessons OR MUSC 301-307 Advanced Private Lessons - 4 Credits
- MUSC 120 Music Theory I - 4 Credits
- MUSC 130 Beginning Class Piano I - 2 Credits **Or**
  MUSC 135 Class Guitar I - 2 Credits
- MUSC 131 Beginning Class Piano II - 2 Credits **Or**
  MUSC 136 Class Guitar II - 2 Credits
- MUSC 211 World Music - 4 Credits
- MUSC 212 American Popular Music - 4 Credits **Or**
  MUSC 213 Introduction to Jazz - 2 Credits **Or**
  MUSC 214 Reel Music in America - 2 Credits **Or**
  MUSC 215 History of Rock Music - 2 Credits
- MUSC 216
- MUSC 217 Introduction to Musicology & Ethnomusicology - 4 Credits
- MUSC 219 Musical Reorientations: - 4 Credits
- MUSC 220 Music Theory II - 4 Credits
- MUSC 225 Western Music History I - 4 Credits
- MUSC 226 Music History II: Romanticism to the 20th Century - 4 Credits
- MUSC 271-279 Ensembles - 16 Credits
- MUSC ELECTIVE - 2 Credits (any MUSC course not already taken)
- MUSC 450 Music Capstone Research - 2 Credits
- MUSC 451 Music Capstone Performance or Presentation- 2 credits

- PERF 101 Core (FYE) - 4 Credits **Or**
  FYE Attribute Course - 4 Credits

ACADEMICS (56 credit hours)

- ENGL 101 Writing I - 4 Credits
- ENGL 102 Writing II - 4 Credits
- Foreign Language - 8 Credits (one year foreign language - 101 and 102)
- Historical Studies - Requirement fulfilled by core course: MUSC 225
- Literature - 4 Credits (attribute A)
- Natural Science - 8 Credits (must take 4 credits from FI attribute. Other 4 credits can be from attribute F1 or FII or FIII)
- Philosophy or Religion - 4 Credits (attribute B)
- Quantitative Reasoning - 4 Credits (attribute 03)
- Social Science - 8 Credits (4 credits fulfilled by core course MUSC 217. Other 4 credits must be taken from attribute E1 or E2)
- The Arts - Requirement fulfilled by core course: THEA 240
- Additional Academic - 16 Credits (can be any course EXCEPT private lessons, ensembles, or Physical Fitness courses)

ELECTIVES (8 credit hours)

- Students must take 8 credits of electives. These 8 credits can be comprised of any courses EXCEPT Physical Fitness courses.

Total credit hours required for the Music Major: 130

Students must also complete:
The University **Global Perspective** requirement
The University **Common Ground** requirement
The University **Lifetime Health & Wellness** requirements

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.

Requirements for the Theatre Major

CORE MAJOR COURSES (62 credit hours)

- DANC 120 Fundamentals of Dance - 2 Credits
- MUSC 211 World Music - 4 Credits
- THEA 145 Improvisation: Just Say Yes! - 2 Credits **Or**
  THEA 245 Improvisation: Just Say Yes! - 2 Credits
- THEA 212 From Page to Stage: Script Analysis - 4 Credits
- THEA 240 Acting I - 4 Credits
- THEA 241 Vocal Production for Theatre - 2 Credits
- THEA 242 Collaborative Performance Lab - 4 Credits
- THEA 270 Play Production - 2 Credits
- THEA 290 Verse Acting - 2 Credits
- THEA 311 Classical World Theatre: History, Art, Politics & Society - 4 Credits
- THEA 312 Modern and Contemporary World Theatre: History, Art, Politics & Society - 4 Credits
- THEA 330 Directing I - 4 Credits
- THEA 340 Acting II - 4 Credits
- THEA 370 Advanced Play Production - 6 Credits
- THEA Professional Practices - 2 Credits
- * THEA or PDAT ELECTIVE - 4 Credits
- THEA 495 Senior Project - 2 Credits
- PERF 101 Core (FYE) - 4 Credits **Or**
  FYE Attribute Course - 4 Credits
- PDAT 120 Technical Theatre - 4 Credits

* ENGL - 214, 411, 412 / DANC - 221, 222, 223, 230, 321, 330, 322, 323 / MUSC - 102, 132, 302 / THEA - 205, 230, 340, 440, 431, 385 / PDAT - 220, 221, 222, 223, 320, 321, 322, 385 / Other courses may be considered must be approved by the Division Chair

ACADEMICS (68 credit hours)

- ENGL 101 Writing I - 4 Credits
- ENGL 102 Writing II - 4 Credits
- Foreign Language - 8 Credits (one year foreign language - 101 and 102)
- Historical Studies - Requirement fulfilled by core course: THEA 311

- Literature - 4 Credits (attribute A)
- Natural Science - 8 Credits (must take 4 credits from FI attribute. Other 4 credits can be from attribute F1 or FII or FIII)
- Philosophy or Religion - 4 Credits (attribute B)
- Quantitative Reasoning - 4 Credits (attribute 03)
- Social Science - 8 Credits (must take 8 credits from two of the following attributes: E1 or E2 or E3)
- The Arts - Requirement fulfilled by core course: MUSC 120
- Additional Academic - 24 Credits (can be any course EXCEPT private lessons, ensembles, or Physical Fitness courses)

ELECTIVES (2 credit hours)

- Students must take 2 credits of electives. These 2 credits can be comprised of any courses EXCEPT Physical Fitness courses.

Total credit hours required for the Theatre Major: 132

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

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 MINOR COURSES (18 credit hours)

- DANC 120 Fundamentals of Dance - 2 Credits
- DANC 211 Dance History - 4 Credits
- DANC 222 Modern Dance I - 2 Credits
- DANC 230 Improvisation/Composition I - 4 Credits
- DANC 270 Alfred University Dance Theatre - 2 Credits
- DANC 330 Improvisation/Composition II - 4 Credits **Or**
  DANC 331 Site Specific Composition - 4 Credits

ADDITIONAL REQUIREMENTS (2 credit hours)

- DANC 200 Special Topics in Dance - 1 to 4 Credits
- DANC 212 Walking the Walk: Creativity, Perception and Walking - 2 Credits
- DANC 214 Embodied Anatomy - 2 Credits
- DANC 223 Jazz Dance I - 2 Credits
- DANC 224 Contact Improvisation - 2 Credits
- DANC 225 Laban Movement Studies - 2 Credits
- DANC 226 Hip Hop Dance - 2 Credits
- DANC 227 African Dance - 2 Credits
- DANC 322 Modern Dance II - 2 Credits
- DANC 323
- DANC 325 Laban Movement Applications - 2 Credits
- DANC 330 Improvisation/Composition II - 4 Credits
- DANC 331 Site Specific Composition - 4 Credits
- DANC 340 New and Existing Repertory - 2 Credits
- DANC 370 Choreographic Practicum - 2 Credits
- DANC 450 Independent Study - 1 to 4 Credits

Total credit hours required for the Dance Minor: 20

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 MINOR COURSES (16 credit hours)

- MUSC 110 Music Appreciation - 4 Credits **Or**
  MUSC 211 World Music - 4 Credits **Or**
  MUSC 225 Western Music History I - 4 Credits **Or**
  MUSC 226 Music History II: Romanticism to the 20th Century - 4 Credits
- MUSC 120 Music Theory I - 4 Credits
- MUSC 130 Beginning Class Piano I - 2 Credits **And**
  MUSC 131 Beginning Class Piano II - 2 Credits **Or**
  MUSC 135 Class Guitar I - 2 Credits **And**

MUSC 136 Class Guitar II - 2 Credits
- MUSC 271-279 Music Ensembles - 4 Credits

If test out option is available and passed for the above courses, student must make up credit deficit within the additional requirement options.

ADDITIONAL REQUIREMENTS (4 credit hours)

- MUSC 101-108 Private Lessons - 1 Credit
- MUSC 132 Beginning Voice Class I - 2 Credits
- MUSC 133 Music of the Guzheng - 2 Credits
- MUSC 200 Special Topics - 1 to 4 Credits
- MUSC 212 American Popular Music - 4 Credits
- MUSC 213 Introduction to Jazz - 2 Credits
- MUSC 214 Reel Music in America - 2 Credits
- MUSC 215 History of Rock Music - 2 Credits
- MUSC 216
- MUSC 217 Introduction to Musicology & Ethnomusicology - 4 Credits
- MUSC 218 Musical Infrastructures - 2 Credits
- MUSC 220 Music Theory II - 4 Credits
- MUSC 301-307 Advanced Private Lessons - 2 Credits

Total credit hours required for the Music Minor: 20

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

CORE MINOR COURSES (14 credit hours)

- PDAT 120 Technical Theatre - 4 Credits
- PDAT 220 Design Fundamentals for Stage, Dance and Film - 4 Credits
- PDAT 270 Play Production - 2 Credits
- THEA 212 From Page to Stage: Script Analysis - 4 Credits

ADDITIONAL REQUIREMENTS (4 credit hours)

- COMM 216 Video Production - 4 Credits
- PDAT 200 Special Topics in Performance Design and Technology - 1 to 4 Credits
- PDAT 221 Making with Fabric - 4 Credits
- PDAT 222 Stage Makeup and Theory - A Different Way of Seeing Skin - 2 Credits
- PDAT 223 Sound Design and Technology - 4 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 228 Costume Design for Dance - 2 Credits
- PDAT 229 Transforming Fabric - 4 Credits
- PDAT 231 Prop Design and Construction - 2 Credits
- PDAT 315 Advanced Design Seminar: Design is Dramaturgy - 2 Credits
- PDAT 320 Scene Design - 2 Credits
- PDAT 321 Lighting Design - 2 Credits
- PDAT 322
- PDAT 330 Costuming on the Half Scale - 4 Credits
- PDAT 450 Independent Study - 1 to 4 Credits
- THEA 230 Stage Management and the Art of Production Collaboration - 4 Credits

Total credit hours required for the Performance Design and Technology Minor: 18

Theatre

Requirements for the Theatre Minor

CORE MINOR COURSES (14 credit hours)

- THEA 212 From Page to Stage: Script Analysis - 4 Credits
- THEA 240 Acting I - 4 Credits
- THEA 270 Play Production - 2 Credits
- THEA 311 Classical World Theatre: History, Art, Politics & Society - 4 Credits

ADDITIONAL REQUIREMENTS (6 credit hours)

- THEA 120 Technical Theatre - 4 Credits
- THEA 145 Improvisation: Just Say Yes! - 2 Credits
- THEA 205 Playmaking: From Writing to Devising For the New Era - 4 Credits
- THEA 230 Stage Management and the Art of Production Collaboration - 4 Credits
- THEA 242 Collaborative Performance Lab - 4 Credits
- THEA 245 Improvisation: Just Say Yes! - 2 Credits
- THEA 290 Verse Acting - 2 Credits
- THEA 312 Modern and Contemporary World Theatre: History, Art, Politics & Society - 4 Credits
- THEA 330 Directing I - 4 Credits
- THEA 340 Acting II - 4 Credits
- THEA 370 Advanced Play Production - 2 Credits
- THEA 431 Directing II - 4 Credits

Other courses may be considered and must be approved by the Division Chair.

Total credit hours required for the Theatre Minor: 20

Kazuo Inamori School of Engineering

The mission of the Kazuo Inamori School of Engineering is to provide academically challenging, inquiry-based programs to prepare technically proficient and broadly educated engineers and scientists at the bachelor, master, and doctoral levels. We offer these programs in a student-centered environment with a strong commitment to the personal and professional development of our students. We engage in research to provide a foundation for our educational programs, to advance the frontiers of knowledge, and to support economic development.

The School of Engineering offers seven Bachelor of Science, six Master of Science and three Ph.D. degrees. The Bachelor of Science (BS) degree programs in Ceramic Engineering (CEGR), Glass Engineering Science (GLES), Materials Science and Engineering (MATS), Mechanical Engineering (MEGR), and Renewable Engineering (RNEW) are accredited by the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, (410) 347-7700. The Biomaterials Engineering (BMEG) has sought accreditation and is awaiting August 2024 confirmation. The Electrical Engineering (EEGR) program will seek accreditation during the next regular review cycle (2027).

Upon graduating with a BS degree any student from an ABET accredited engineering program can 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 cooperative education or internship programs that have developed from partnerships with industry.

General Degree Requirements

School of Engineering General Graduation and Core Requirements

Credit Hour and GPA Requirement

To receive a Bachelor of Science degree from the School of Engineering, students must complete at least 130 credit hours and fulfill the requirements of the major, which may involve completing more than 130 credit hours for some. Students must achieve a GPA of at least 2.0, without more than 7 credits of D or D+, in all engineering courses (any course offered by SoE at any level) in addition to a cumulative GPA of at least 2.0 required by Alfred University. Accumulation of excess D or D+ grades constitute “low grades in critical prerequisite courses” per the Academic Standing requirements in this Catalog and may result in being placed on Academic Probation.

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 (ENGR160/360) may be placed on Academic Probation. 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 constitute “low grades in critical prerequisite courses” per the Academic Standing requirements in this Catalog and may result in being placed on Academic Probation.

Inamori School of Engineering General Education

The General Education requirements for B.S. degrees of Alfred University's College of Business and the School of Engineering certify basic competencies in Written Communication. Quantitative Reasoning, Humanities, Natural Sciences, and Social Sciences consistent with NYSED definitions. General Education 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 with specific SoE requirements in each area. The online course system (Banner/DegreeWorks) and the College of Business section of this Catalog list courses that apply to the competency areas.

Written Communication:

All AU students must successfully complete ENGL 101, or an equivalent course, or achieve specified scores on standardized tests as determined by the College of Liberal Arts and Science.

All SoE degrees require writing competence at a second semester level, i.e., completion of ENGR 110.

Quantitative Reasoning:

All programs in SoE require completion of a minimum of twelve Quantitative Reasoning credits. At least one course must address statistics, i.e., ENGR 305, BIOL 226, 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 all QR courses contribute to the General Education credit total.

BIOL 226

BUSI 113, 150, 213

ENGR 305

ENVS 205

MATH 101, 102, 104, 151, 152, 253, 271, 371

MIS 101

POLS 230

PSYC 221

SOCI 230

Topics or Independent Studies Courses in MATH, if pre-approved by the student's Dean.

Humanities:

All programs in SoE require completion of a minimum of six Humanities credits, from at least two different departmental acronyms/subjects. Acronyms of cross-listed courses will be determined from the actual course of registration. The credits from all Humanity courses contribute to the General Education credit total.

Course List:

ARTH – 210, all 300+ level courses

CHIN 101, 102, 201, 202

CLAS 201

COMM 205, 412
CSCI 305

DANC 211

ENGL 200:499

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

SIGN 101, 102

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

Topics or Independent Studies in the above areas if pre-approved by the student's Dean.

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 all Natural Science courses contribute to the General Education total.

Course List:

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

CHEM 105,105L, 106, 106L, 310, 315, 316, 321, 343, 345, 346, 372, 374, 400, 420, 423, 461, 490

CSCI 156, 157, 205

EQUS 205, 225, 226

DATA 156, 201, 202, 203, 205
ENGR 206

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
RNEW 431, 432

SCIE 110, 111, 115, 127

Topics or Independent Studies in the above areas if pre-approved by the student's Dean.

Social Sciences:

All programs in SoE require completion of a minimum of four Social Science credits, one of which is UNVI 101 Common Ground (a University-wide requirement). Note that the specific degree requirements may require other Social Sciences courses to meet specific SoE degree program requirements. The credits from all Social Science courses contribute to the General Education credit total.

Course List:

ANTH 110, 120, 302, 303, 304, 309, 311, 312, 321, 400, 495

ATHT 242

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

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, 220, 251, 261, 262, 270, 282, 300, 302, 310, 311, 320, 322, 332, 341, 342, 351, 362, 371, 372, 389, 400, 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

Topics or Independent Studies in the above areas, except ENGR, if pre-approved by the student's Dean.

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 and to the minimum credits for the degree.

Course List:

ATHT 111, 190, 215, 222
BIOL 105, 120
DANC 120, 200, 222, 223, 224, 226
PSYC 251, 322, 351
WELL 100, 101
WGST 351

Seminar Requirement:

Students must successfully complete eight total semesters of: ENGR 160 (maximum of two), ENGR 360, and/or COOP 385 with one semester credited for each 16 applicable credits of part-time and/or transfer work applicable to the program.

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 which also

contributes to the seminar requirement. 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.

Engineering Major Requirements

Biomaterials Engineering (BMEG)

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.

BMEG 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.

BMEG Basic Competencies/Engineering Core

CHEM 105 General Chemistry I - 3 Credits

CHEM 105L General Chemistry I Laboratory - 1 Credit

CHEM 106 General Chemistry II - 3 Credits

CHEM 106L General Chemistry II Laboratory - 1 Credit

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

PHYS 125L

PHYS 126 Physics II - 4 Credits

PHYS 126L

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

ENGR 117 Engineering Foundations II - 2 Credits

ENGR 117L

ENGR 305 Engineering Statistics - 3 Credits

ENGR 306 Engineering Economics - 2 Credits

ENGR 395 Engineering Design - 2 Credits

* ENGR 480 Senior Capstone Individual Project - 2 Credits

* This course is taken twice over the final two semesters for a cumulative total of 4 credits.

BMEG Major Requirements

BIOL 150 Biological Foundations - 4 Credits

BIOL 211 Cell Biology - 4 Credits

BIOL 211L

CEMS 214 Structure and Properties of Materials - 3 Credits

CEMS 215 Microscopy and Microstructural Characterization - 3 Credits

CEMS 215L

CEMS 216 Bonding and Structure of Materials - 3 Credits

CEMS 235 Thermodynamics of Materials - 4 Credits

CEMS 237 Thermal Processes in Materials - 4 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 460 Biology for Engineers - 3 Credits

CEMS 465 Biocompatibility - 4 Credits

CEMS 468 Biomedical Materials - 3 Credits

CHEM 310 Basic Organic Chemistry - 3 Credits

CHEM 315 Organic Chemistry I - 3 Credits

CHEM 316 Organic Chemistry II - 3 Credits

MECH 211 Statics - 3 Credits

MECH 241 Mechanics of Materials - 3 Credits

6 Credits – BME Program-specific electives which can include:

BCHM 320, BCHM 420, BCHM 422, BIOL 302, BIOL 306, BIOL 307, BIOL 308, BIOL 320, BIOL 376, BIOL 402, BIOL 405, BIOL 420, BIOL 422, non-required CEMS 36x or 46x, BCHM, BIOL, or CEMS Topics, Independent Study, and ENGR 385/Internship if pre-approved by the Dean.

3 Credits – Technical Electives which can include:

(A) Most 300- and 400-level courses designated CEMS, CHEM, ELEC, ENGR, MATH, MECH, PHYS, or RNEW. Exceptions include: CHEM 343, MATH 331, MECH 320, and Topics courses unless approved by the Dean. (B) One of FIN 348 or MGMT 328, (C) COOP 385 or ENGR 385/Internship if pre-approved by the Dean.

General Education/Areas of Knowledge/ University Requirements

9 Credits - Additional General Education (Humanities – 6 Credits, Social Science – 3 Credits including one course with the Global Perspectives attribute)

12 Credits - Natural Sciences (will be fulfilled by required classes)

2 Credits - Wellness

1 Credit - Common Ground

1 Credit - Fitness

Typical Credit Hours 140

Ceramic Engineering (CEGR)

Ceramics are materials of great diversity; their properties make them useful in 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 ends up owning their own companies.

The BS program in Ceramic Engineering is accredited by the Engineering Accreditation Commission of ABET under the General Criteria and the Program Criteria for Materials, Metallurgical, Ceramics and Similarly Named Engineering Programs.

CEGR 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.

CEGR Basic Competencies/Engineering Core

CHEM 105 General Chemistry I - 3 Credits

CHEM 105L General Chemistry I Laboratory - 1 Credit

CHEM 106 General Chemistry II - 3 Credits

CHEM 106L General Chemistry II Laboratory - 1 Credit

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

PHYS 125L

PHYS 126 Physics II - 4 Credits

PHYS 126L

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

ENGR 117 Engineering Foundations II - 2 Credits

ENGR 117L

ENGR 305 Engineering Statistics - 3 Credits

ENGR 306 Engineering Economics - 2 Credits

ENGR 395 Engineering Design - 2 Credits

** ENGR 480 Senior Capstone Individual Project - 2 Credits

** This course is taken twice over the final two semesters for a cumulative total of 4 credits.

CEGR Major Requirements

CEMS 203 Introduction to Ceramic Powder Processing - 3 Credits

CEMS 214 Structure and Properties of Materials - 3 Credits

CEMS 215 Microscopy and Microstructural Characterization - 3 Credits

CEMS 215L

CEMS 216 Bonding and Structure of Materials - 3 Credits

CEMS 235 Thermodynamics of Materials - 4 Credits

CEMS 237 Thermal Processes in Materials - 4 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

ENGR 104 Computer Aided Engineering - 2 Credits

ENGR 220 Circuit Theory I - 4 Credits

ENGR 220L

MECH 211 Statics - 3 Credits

MECH 241 Mechanics of Materials - 3 Credits

6 Credits – CERE Program-specific electives which can include:

CEMS 316(3), 318(3), 325(2), 328(3), 352(3), 411(3)/412, 415(3)/414, 438(3), 468(3), 408(3).

3 Credits – Technical Electives which can include:

(A) Most 300- and 400-level courses designated CEMS, CHEM, ELEC, ENGR, MATH, MECH, PHYS, or RNEW. Exceptions include: CHEM 343, MATH 331, MECH 320, and Topics courses unless approved by the Dean. (B) One of FIN 348 or MGMT 328, (C) COOP 385 or ENGR 385/Internship if pre-approved by the Dean.

General Education/Areas of Knowledge/ University Requirements

9 Credits - Additional General Education (Humanities – 6 Credits, Social Science – 3 Credits including one course with the Global Perspectives attribute)

12 Credits - Natural Sciences (will be fulfilled by required classes)

2 Credits - Wellness

1 Credit - Common Ground

1 Credit - Fitness

Typical Credit Hours 130

Electrical Engineering (EEGR)

Electrical Engineering is the largest and most diverse field of engineering today. It deals with the practical application of electrical science and technology to the needs of society as well as to research in and development of new applications. Areas such as electronic information processing and communications, semiconducting devices, superconducting devices, computer systems, electronic instrumentation, power and machinery, control systems, and signal systems and analysis are covered. A minor in mathematics is

easily obtained by Electrical Engineering students. A degree in Electrical Engineering, along with the professional engineer's license, guarantees a wide variety of career options: industry, research, marketing, consulting, management, sales, teaching, graduate school, or government. Fields of Specialization in Electrical Engineering Automatic Control and Robotics Modern control systems are used for controlling the many production systems found in industrial plants and in data processing necessary in banks and other businesses. Controllers are implemented using analog components, microprocessors, PCs, and digital signal processors. The mathematics of control includes the modeling of physical systems, both natural and man-made. Computer Engineering Computer Engineers are concerned with the design and production of the hardware and software components comprising computer systems, computer organization and architecture, system programming, operating systems, and digital hardware design. Computer Engineers do research into network design and artificial intelligence, and embedded systems. Power Generation, Transmission, Distribution and Use The pervasive need for electrical energy for both industrial and private use guarantees job opportunities for electrical engineers who are concerned with all forms of power generation, transmission and distribution. Some electrical engineers may work on innovative energy conversion by solar, fuel cell, wind generation or other alternative sources. Communication Systems and Optoelectronics Electrical engineers in this area may work in radio, television, telephone, or in satellite, microwave or fiber optics systems. This field requires knowledge of antennas, lasers, electromagnetic principles for waveguides and electrical and optical properties of materials.

Electronic Materials and Solid-State Circuitry is assisting the revolutions in information systems, instrumentation and controls, communications systems, and even automotive and consumer products. The microprocessor integrated circuit is altering operational methods in nearly all electrical engineering applications. Engineers who work in electronics design and development require knowledge of both electrical science and materials. Electroceramics are the enabling materials for nearly all passive and active electrical components. Electroceramics are often the materials that give physical existence to the work of electrical engineers. For example, superconductors, fuel cell electrolytes, and phosphors are all electroceramics. Typical electroceramic components, produced by the billions, include multilayer capacitors, inductors, resistors, filters, resonators, sensors, actuators, computer chip substrates, and other solid state electronic parts.

EEGR Program Objectives

The objectives of the Electrical Engineering Program are to produce engineers who:

1) Advance in multidisciplinary engineering careers within the context of Electrical Engineering beginning with either entry-level positions in industry or postgraduate studies in electrical engineering and related fields.

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 with understanding of complex social issues where engineering will play a key role.

EEGR Basic Competencies/Engineering Core

CHEM 105 General Chemistry I - 3 Credits

CHEM 105L General Chemistry I Laboratory - 1 Credit

CHEM 106 General Chemistry II - 3 Credits

CHEM 106L General Chemistry II Laboratory - 1 Credit

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

PHYS 125L

PHYS 126 Physics II - 4 Credits

PHYS 126L

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

ENGR 117 Engineering Foundations II - 2 Credits

ENGR 117L

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 Credits

*** This course is taken twice over the final two semesters for a cumulative total of 4 credits.

EEGR Major Requirements

ELEC 210 Digital Logic - 4 Credits

ELEC 310 Microprocessor Systems and Applications - 4 Credits

ELEC 320 Circuit Theory II - 4 Credits

ELEC 320L

ELEC 354 Device Electronics - 3 Credits

ELEC 356 Electronic Circuits - 4 Credits

ENGR 104 Computer Aided Engineering - 2 Credits

ENGR 220 Circuit Theory I - 4 Credits

ENGR 220L

ENGR 388 Applied Complex Variables - 3 Credits

MECH 212 Dynamics - 3 Credits

MECH 320 Thermodynamics I - 3 Credits

MECH 422 Control Systems - 3 Credits

RNEW 303 Software Engineering - 4 Credits **Or**
CSCI 156 Computer Science I - 4 Credits

RNEW 322 Signals and Systems - 3 Credits

RNEW 355 Power System Operation and Economics - 3 Credits

RNEW 468 Electric Machinery - 3 Credits

6 Credits - Students complete any one of the following sequences:

Computer Engineering: VLSI Design ELEC 4X1/Computer Architecture ELEC 4X2

Renewable Energy: RNEW 432 Solar Energy/RNEW 431 Wind Energy

Controls: ELEC 422 (currently MECH 422)/ELEC 423

Power Engineering: Modern Electric Grids ELEC 433/Advanced Power Electronics ELEC 441

6 Credits - Technical Electives which can include:

(A) Most 300- and 400-level courses designated CEMS, CHEM, ELEC, ENGR, MATH, MECH, PHYS, or RNEW. Exceptions include: CHEM 343, MATH 331, MECH 320, and Topics courses unless approved by the Dean. (B) One of FIN 348 or MGMT 328, (C) COOP 385 or ENGR 385/Internship if pre-approved by the Dean.

General Education/Areas of Knowledge/ University Requirements

9 Credits - Additional General Education (Humanities – 6 Credits, Social Science – 3 Credits including one course with the Global Perspectives attribute)

12 Credits - Natural Sciences (will be fulfilled by required classes)

2 Credits - Wellness

1 Credit - Common Ground

1 Credit - Fitness

Typical Credit Hours 132

Glass Engineering Science (GLES)

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.

The BS program in Glass Science and Engineering is accredited by the Engineering Accreditation Commission of ABET under the General Criteria and the Program Criteria for Materials, Metallurgical, Ceramics and Similarly Named Engineering Programs.

GLES 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.

GLES Basic Competencies/Engineering Core

CHEM 105 General Chemistry I - 3 Credits

CHEM 105L General Chemistry I Laboratory - 1 Credit

CHEM 106 General Chemistry II - 3 Credits

CHEM 106L General Chemistry II Laboratory - 1 Credit

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

PHYS 125L

PHYS 126 Physics II - 4 Credits

PHYS 126L

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

ENGR 117 Engineering Foundations II - 2 Credits

ENGR 117L

ENGR 305 Engineering Statistics - 3 Credits

ENGR 306 Engineering Economics - 2 Credits

ENGR 395 Engineering Design - 2 Credits

**** ENGR 480 Senior Capstone Individual Project - 2 Credits

**** This course is taken twice over the final two semesters for a cumulative total of 4 credits.

GLES Major Requirements

CEMS 214 Structure and Properties of Materials - 3 Credits

CEMS 215 Microscopy and Microstructural Characterization - 3 Credits

CEMS 215L

CEMS 216 Bonding and Structure of Materials - 3 Credits

CEMS 235 Thermodynamics of Materials - 4 Credits **Or**
MECH 320 Thermodynamics I - 3 Credits

CEMS 237 Thermal Processes in Materials - 4 Credits

CEMS 322 Introduction to Glass Science - 3 Credits

CEMS 325 Glass Laboratory - 2 Credits

CEMS 325L

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 347L

CEMS 349 X-ray Characterization - 2 Credits

CEMS 349L

CEMS 423 Mass Transport in Glasses and Melts - 3 Credits

ENGR 104 Computer Aided Engineering - 2 Credits

ENGR 220 Circuit Theory I - 4 Credits **Or**
ELEC 220 Circuit Theory I - 4 Credits **Or**
ELEC 223 Electrical Engineering Laboratory for Non-EE - 2 Credits **Or**
ELEC 325 Data Acquisition - 2 Credits

ENGR 220L

MECH 211 Statics - 3 Credits

MECH 241 Mechanics of Materials - 3 Credits

6 Credits – GLES Program-specific electives which can include:

Any CEMS 32x or CEMS 42x course, CEMS Topics and Independent Study, or ENGR 385/Internship if pre-approved by the Dean.

3 Credits – Technical Electives which can include:

(A) Most 300- and 400-level courses designated CEMS, CHEM, ELEC, ENGR, MATH, MECH, PHYS, or RNEW. Exceptions include: CHEM 343, MATH 331, MECH 320, and Topics courses unless approved by the Dean. (B) One of FIN 348 or MGMT 328, (C) COOP 385 or ENGR 385/Internship if pre-approved by the Dean.

General Education/Areas of Knowledge/ University Requirements

9 Credits - Additional General Education (Humanities – 6 Credits, Social Science – 3 Credits including one course with the Global Perspectives attribute)

12 Credits - Natural Sciences (will be fulfilled by required classes)

2 Credits - Wellness

1 Credit - Common Ground

1 Credit - Fitness

Typical Credit Hours 131

Materials Science and Engineering (MATS)

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.

The BS program in Materials Science and Engineering is accredited by the Engineering Accreditation Commission of ABET under the General Criteria and the Program Criteria for Materials, Metallurgical, Ceramics and Similarly Named Engineering Programs.

MATS 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.

MATS Basic Competencies/Engineering Core

CHEM 105 General Chemistry I - 3 Credits

CHEM 105L General Chemistry I Laboratory - 1 Credit

CHEM 106 General Chemistry II - 3 Credits

CHEM 106L General Chemistry II Laboratory - 1 Credit

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

PHYS 125L

PHYS 126 Physics II - 4 Credits

PHYS 126L

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

ENGR 117 Engineering Foundations II - 2 Credits

ENGR 117L

ENGR 305 Engineering Statistics - 3 Credits

ENGR 306 Engineering Economics - 2 Credits

ENGR 395 Engineering Design - 2 Credits

***** ENGR 480 Senior Capstone Individual Project - 2 Credits

***** This course is taken twice over the final two semesters for a cumulative total of 4 credits.

MATS Major Requirements

CEMS 214 Structure and Properties of Materials - 3 Credits

CEMS 215 Microscopy and Microstructural Characterization - 3 Credits

CEMS 215L

CEMS 216 Bonding and Structure of Materials - 3 Credits

CEMS 235 Thermodynamics of Materials - 4 Credits **Or**
MECH 320 Thermodynamics I - 3 Credits

CEMS 237 Thermal Processes in Materials - 4 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 347L

CEMS 349 X-ray Characterization - 2 Credits

CEMS 349L

CEMS 446 Mechanics of Composites - 3 Credits

ENGR 104 Computer Aided Engineering - 2 Credits

ENGR 220 Circuit Theory I - 4 Credits **Or**
ELEC 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 220L

MECH 211 Statics - 3 Credits

MECH 241 Mechanics of Materials - 3 Credits

6 Credits – Technical Electives which can include:

(A) Most 300- and 400-level courses designated CEMS, CHEM, ELEC, ENGR, MATH, MECH, PHYS, or RNEW. Exceptions include: CHEM 343, MATH 331, MECH 320, and Topics courses unless approved by the Dean. (B) One of FIN 348 or MGMT 328, (C) COOP 385 or ENGR 385/Internship if pre-approved by the Dean.

General Education/Areas of Knowledge/ University Requirements

9 Credits - Additional General Education (Humanities – 6 Credits, Social Science – 3 Credits including one course with the Global Perspectives attribute)

12 Credits - Natural Sciences (will be fulfilled by required classes)

2 Credits - Wellness

1 Credit - Common Ground

1 Credit - Fitness

Typical Credit Hours 132

Mechanical Engineering (MEGR)

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. They 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.

The BS program in Mechanical Engineering is accredited by the Engineering Accreditation Commission of ABET under the General Criteria and the Program Criteria for Mechanical and similarly named Engineering Programs.

MEGR 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.

MEGR Basic Competencies/Engineering Core

CHEM 105 General Chemistry I - 3 Credits

CHEM 105L General Chemistry I Laboratory - 1 Credit

CHEM 106 General Chemistry II - 3 Credits

CHEM 106L General Chemistry II Laboratory - 1 Credit

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

PHYS 125L

PHYS 126 Physics II - 4 Credits

PHYS 126L

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

ENGR 117 Engineering Foundations II - 2 Credits

ENGR 117L

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 Credits

****** This course is taken twice over the final two semesters for a cumulative total of 4 credits.

MEGR Major Requirements

CEMS 214 Structure and Properties of Materials - 3 Credits

ENGR 104 Computer Aided Engineering - 2 Credits

ENGR 220 Circuit Theory I - 4 Credits

ENGR 220L

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 343L

MECH 362 Kinematics and Dynamics of Machinery - 3 Credits

MECH 364 Machine Design I - 3 Credits

MECH 366 Manufacturing - 3 Credits

MECH 366L

MECH 417 Introduction to Finite Element Analysis - 3 Credits

6 Credits - MEGR Specific Electives which may include:

MECH 415, MECH 422, MECH 424, MECH 434, MECH 435, MECH 438, MECH 448, MECH 486, RNEW 310, RNEW 322, RNEW 431, RNEW 432, PHYS 421, PHYS 423, ENGR 484, CEMS 438, CEMS 446, any non-required MECH 4xy course, or ENGR 385/ Internship if pre-approved by the Dean.

3 Credits - Technical Electives which may include:

(A) Most 300- and 400-level courses designated CEMS, CHEM, ELEC, ENGR, MATH, MECH, PHYS, or RNEW. Exceptions include: CHEM 343, MATH 331, and non-MECH Topics courses unless approved by the Dean. (B) One of FIN 348 **or** MGMT 328, (C) COOP 385 or or ENGR 385/Internship if pre-approved by the Dean, (D) MECH Topics unless used as MECH Elective.

General Education/Areas of Knowledge/ University Requirements

9 Credits - Additional General Education (Humanities – 6 Credits, Social Science – 3 Credits including one course with the Global Perspectives attribute)

12 Credits - Natural Sciences (will be fulfilled by required classes)

2 Credits - Wellness

1 Credit - Common Ground

1 Credit - Fitness

Typical Credit Hours 129

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.

The BS program in Renewable Energy Engineering is accredited by the Engineering Accreditation Commission of ABET under the General Criteria.

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 Basic Competencies/Engineering Core

CHEM 105 General Chemistry I - 3 Credits

CHEM 105L General Chemistry I Laboratory - 1 Credit

CHEM 106 General Chemistry II - 3 Credits

CHEM 106L General Chemistry II Laboratory - 1 Credit

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

PHYS 125L

PHYS 126 Physics II - 4 Credits

PHYS 126L

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

ENGR 117 Engineering Foundations II - 2 Credits

ENGR 117L

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 Credits

******* This course is taken twice over the final two semesters for a cumulative total of 4 credits.

RNEW Major Requirements

ELEC 320 Circuit Theory II - 4 Credits

ELEC 320L

ENGR 104 Computer Aided Engineering - 2 Credits

ENGR 220 Circuit Theory I - 4 Credits

ENGR 220L

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

RNEW 201 Renewable Energy - 3 Credits

RNEW 303 Software Engineering - 4 Credits **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 355 Power System Operation and Economics - 3 Credits

RNEW 431 Wind Energy - 3 Credits

RNEW 432 Solar Energy Systems - 3 Credits

RNEW 468 Electric Machinery - 3 Credits

6 Credits – Technical Electives which can include:

(A) Most 300- and 400-level courses designated CEMS, CHEM, ELEC, ENGR, MATH, MECH, PHYS, or RNEW. Exceptions include: CHEM 343, MATH 331, MECH 320, and Topics courses unless approved by the Dean. (B) One of FIN 348 or MGMT 328, (C) COOP 385 or ENGR 385/Internship if pre-approved by the Dean.

General Education/Areas of Knowledge/ University Requirements

9 Credits - Additional General Education (Humanities – 6 Credits, Social Science – 3 Credits including one course with the Global Perspectives attribute)

12 Credits - Natural Sciences (will be fulfilled by required classes)

2 Credits - Wellness

1 Credit - Common Ground

1 Credit - Fitness

Typical Credit Hours 132

Engineering Exploration

Alfred University offers a first-year Engineering Exploration 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 II, First Year Seminar, Introduction to Engineering, and English Composition. In the second semester, undecided students enroll in Calculus II, General Chemistry II, General Physics I, Computer Aided Design, Computer Aided Engineering, Technical Communications, and Common Ground.

Double Majors

Inamori School of Engineering undergraduates may add a second engineering major, with some restrictions. There are no restrictions on adding double majors offered by academic units other than the Inamori School of Engineering.

Availability of engineering double majors is as follows:

- Glass Engineering Science, available to BMEG, EEGR, MEGR and RNEW students
- Materials Science, available to BMEG, EEGR, MEGR and RNEW students
- Ceramic Engineering, available to BMEG, EEGR, MEGR and RNEW students
- Mechanical Engineering, available to SoE students
- Biomaterials Engineering, available to SoE students
- Electrical Engineering, available to SoE students
- Renewable Engineering, available to SoE students

Inamori School of Engineering: Double Majors and Minors

	Could double major in:

All degrees are BS	Majors	BMEG	CEGR	EEGR	GLES	MATS	MEGR	RNEW
	BMEG	NA	Yes	Yes	Yes	Yes	Yes	Yes
	CEGR	Yes	NA	Yes	No	No	Yes	Yes
	EEGR	Yes	Yes	NA	Yes	Yes	Yes	Yes
	GLES	Yes	No	Yes	NA	No	Yes	Yes
	MATS	Yes	No	Yes	No	NA	Yes	Yes
	MEGR	Yes	Yes	Yes	Yes	Yes	NA	Yes
	RNEW	Yes	Yes	yYes	Yes	Yes	Yes	NA

Could minor in:

All degrees are BS	Majors	BMEG	CEGR	EEGR	GLES	MATS	MEGR	RNEW
	BMEG	NA	No	No	Yes	No	Yes	Yes
	CEGR	Yes	NA	No	Yes	No	Yes	Yes
	EEGR	Yes	No	NA	Yes	Yes	Yes	Yes
	GLES	Yes	No	No	NA	No	Yes	Yes
	MATS	Yes	No	No	Yes	NA	Yes	Yes
	MEGR	Yes	No	No	Yes	Yes	NA	Yes
	RNEW	Yes	No	No	Yes	Yes	Yes	NA

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 (BMEG)

Requirements for the Biomaterials Minor

- BIOL 211 Cell Biology - 4 Credits
- CEMS 214 Structure and Properties of Materials - 3 Credits
- 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 420 Biochemistry: Proteins and Metabolism - 4 Credits
- BIOL 422 Biochemistry: Nucleic Acids - 4 Credits
- CEMS 460 Biology for Engineers - 3 Credits
- CEMS 466

Minimum total credit hours: 23

Glass Engineering Science (GLES)

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
- 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 (MATS)

Requirements for the Materials Science Minor

- CEMS 214 Structure and Properties of Materials - 3 Credits
- CEMS 216 Bonding and Structure of Materials - 3 Credits
- CEMS 235 Thermodynamics of Materials - 4 Credits **Or**
  CEMS 214 Structure and Properties of Materials - 3 Credits **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 237 Thermal Processes in Materials - 4 Credits
- 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 (MEGR)

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
- RNEW 3XX/4XX
- ELEC 3XX/4XX

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

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. Students in an internship typically receive 1 credit per four weeks of internship.
Co-op and internship 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.

University Courses

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.

DUMB 100 - Dummy Course - Reg Use 0 credit hours.

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 103 - Terra Cotta 2 credit hours. Terra cotta is iconic in Alfred and had a major impact in the local area. Defined as “baked earth,” terra cotta is a type of ceramic material and is used in various ways. It can be explored through disciplines like engineering, art, business, history, environmental science, and geology. This course will explore terra cotta in those areas, using Alfred and its history as the base. The class will involve field trips, guest speakers, short readings and in-class discussions. Students will focus on a topic of their choosing for a capstone project. Note: this seminar will meet from 6:20-8:10.

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 106 - Corporate Scandals & Business 2 credit hours. This course explores Italian history and culture from the Ancient World through the Present. Learn basic skills in the Italian language through classroom presentations and film; explore the rich architecture and works of art from Rome, Florence and Venice; discover Italian composers and watch an opera; uncover the secrets of delicious Italian cooking!

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 110 - ZINE Machine 2 credit hours. A zine (as in magaZINE) is a popular form of do-it-yourself publication. Zinesters use drawing, poetry, narrative, and collage as a form of personal expression and community building. In this class, students will make and distribute their own original zines, discuss zine theory, and learn about zine history. Students will complete their first zine on the first day of class! Students will explore zines from a variety of communities and creators including BIPOC, queer, goth, and punk. Co-taught by a librarian and an artist, this course will offer perspectives from the art world and the world of librarianship. Note: this seminar will meet from 6:20-8:10

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. With recent shows like The Mandalorian, Andor, and Ahsoka, Disney has channeled the Force and churned out additions to the Star Wars saga, with franchised images on everything from toys to coffee creamer. This course will examine 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.

Students will engage in weekly quizzes, essays, arguments, and discussions based on readings and screenings, culminating in a final project.

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 117 - The Food Lab 2 credit hours. This class explores the science of cooking, flavor, and nutrition. Each of us will commit to record each meal (breakfast, lunch, dinner, and a snack) at least once each week for discussion in class. Discussion points include how it was prepared, how it tasted, and its nutritional and caloric content. When the meal is self-prepared, a detailed recipe will also be discussed. We will prepare at least one meal together. The chemical and physical changes that occur during cooking will be discussed. There will be one formal written assignment, a term paper on a randomly assigned international or regional food. No prior knowledge of chemistry is necessary.

HONR 119 - Film Photography 2 credit hours. This seminar will explore the recent revitalization of film photography through social media trends and pop culture uses. Students will get a hands-on approach in all aspects of shooting film. From various stocks of black & white to color film, we'll cover a variety of methods surrounding analogue photography. Students will also get hands-on time with the dark room for developing their own film and creating their photos. Cameras alongside materials and lab usage will be provided. Students of all backgrounds and levels of experience are welcome.

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 121 - Natural Glasses 2 credit hours. What do obsidian and amber have in common? Both are natural glasses, just like the silica skeleton of a deep-sea sponge or tektites and fulgurites which have been melted by meteorite impact or lightning. We want to explore natural glasses from their historic significance (having been used as tools and jewelry as early as the stone age), to differences and similarities in their structure and properties to how these materials inspire modern and future materials (biomimetics). We offer hands-on analysis of natural glasses by Electron Scanning Microscopy, X-ray diffraction, or spectroscopy; you will work with our TA and no special science background is required, though welcome. In class presentations will be complemented by posters and presentations of our artifacts for the AU Glass Museum which will be opened soon.

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 125 - Watching The Sopranos: The Psychopathology of Everyday Violence 2 credit hours. This seminar will consist of our watching, discussing, and reading about the mafia television series The Sopranos, which brought a rich cinematic style to the “small screen” and then used the form of a serialized drama to subvert the expectations we bring as seasoned TV-watchers. We will interpret the show from 3 key perspectives: as an exploration of human psychology, as a part of the gangster genre in American cinema, and as an exploration of American materialism and its political, cultural, and spiritual effects.

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.

HONR 137 - American Gothic: Films of David Lynch 2 credit hours. Sex and violence: as American as apple pie, right? The films of David Lynch give us a gorgeous and disturbing view of the shiny surfaces and dark murk at the heart of American life.

Stylish like Hitchcock, more daring than Tarantino, Lynch's movies are as unique and (wonderfully) perverse as your most stunning dreams. In this course we will watch and discuss Lynch's movies with appropriate divergences into dream interpretation theory, the world of sexual and social deviance, and Hollywood (the world of deviant dreams). We'll watch: Eraserhead, Blue Velvet, Twin Peaks (select TV episodes and Fire Walk With Me), Mulholland Drive, and Inland Empire. A final project will consist in students writing a short scene (dialogue and description) inspired by Lynch.

HONR 144 - Adverse & Protective Child Exp 2 credit hours. This course will explore how adverse childhood experiences (ACEs) can negatively influence development contributing to both physical and mental illnesses. It will also explore how protective and compensatory childhood experiences (PACEs) can mitigate the detrimental effects of adverse ones. Information from a broad range of fields will be discussed, including child psychology, parenting, psychopathology, neuropsychology, health psychology, medicine, sociology, and education. Final grades will be based on class participation (60%) and four short (1-3 page) papers (40%).

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. Some theorize that this planet has been visited by aliens for millennia and that these visitors have influenced the course of human history. In this course, we will discuss select theories and their merit and discuss the search for life in the universe. We'll discuss allegations that some proponents of these theories have fabricated evidence, while others have willfully ignored reliable evidence contrary to their theory. These points will be covered as well as part of a discussion of scientific misconduct. Students will write a paper on an alien theory of their choosing. Finally, the class will make and edit our own episode of Ancient Aliens, focusing on "(entirely fabricated) alien theories" as they relate to Alfred University.

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. "Bad"? "Dirty"? Vulgar? Taboo? Obscene? To whom and why? All c-words, f-words, n-words, and s-words are not the same. We'll look at social layers of offensive language and gestures, changing meanings and functions over time with examples ranging from lit to pop culture, from James Joyce's Ulysses (in 1931, "the most notorious book in the world") to Go the F**k to Sleep (2011 by Adam Mansback and Ricardo Cortés; read by Samuel L. Jackson on YouTube), as well as differences across cultures. Gender, sex, race, ethnicity, politics, class—they're all here. Think of this as a course suspending judgement and discomfort freeing us to think critically about

a fascinating topic. Heck yes. 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 159 - Monsters, from Folklore to Reality 2 credit hours. In this course, we'll examine the influence of religion, culture, and science on monsters throughout history. We’ll look at how we respond to the presence of monsters including alpha predators or other creatures stemming from folklore or reality. Monster-related topics such as genetic engineering, artificial intelligence, epidemics, & invasive species will be analyzed. We'll also focus on the scariest monsters – HUMANS. Through group presentations, designing our own monsters, keeping a journal, and a team trivia final, we'll discuss how racism, anti-immigration, and nuclear fears are expressed through monsters’ portrayal in literature and the media. We’ll talk about the psychology of fear, hopefully partaking in Halloween traditions ranging from pumpkin carving and haunted houses & a field trip to Gettysburg.

HONR 161 - The Doctor in the Police Box 2 credit hours. The entire universe--all of time and all of space--where do you want to go? In this seminar we examine the 50-year history of Doctor Who. We’ll look at how the TARDIS works, both as a time machine and a space ship; the companions over the years, and how they have changed over time; and the aliens and other opponents the Doctor has faced; as well as topics such as mythological influences and gender. Weekly assignments include watching an episode or two and some reading. ; we’ll also gather to watch the 60th anniversary special in November. Students will give a final presentation on an analytical or creative topic of their choice.

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 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 178 - American Gangster 2 credit hours. The mob movie is one of America’s classic movie genres. These genres explore what it means to live in a materialistic, violent country that enjoys imagining a world ordered by “codes of honor.” In this course we will watch films from this genre’s very beginning up to the groundbreaking re-evaluation of the mafia in The Sopranos. We’ll consider these films from three different perspectives: as distinct versions of the mobster genre; as pointed critiques of capitalist America; and as explorations of the human psyche and its tendency to indulge in violent fantasies. No prior familiarity with any of these films is expected. Films may include: Scarface, The Godfather, GoodFellas, American Gangster and many more. Weekly screenings and class presentation projects will be the center of our discussions.

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 190 - Mathematics & Machine Guns 2 credit hours. What was the logistical genius of Napoleon Bonaparte? How much total force would one warrior have experienced being a part of a shield wall? This course, co-taught by a professor of mathematics and a former infantry platoon leader in the United States Army, will cover vignettes in military history when the numbers behind what happened can give us a better understanding of the situation overall. The course will be lecture and discussion-based with students submitting reflections throughout the course and the final project being a presentation made by the students on a connection between mathematics and an aspect of warfare.

HONR 192 - Printed Matter 2 credit hours. This course will explore the recent history of printed matter through social media and popular culture. Students will get a hands-on approach in all aspects of designing, stenciling, printing and reproduction. From printing on clothes to objects, we’ll cover a variety of methods around print and marking. We’ll discuss color theory, practical design elements, Photoshop and all the current trends shaping modern prints and impressions. A final critique of your printed matter in the form of a site-specific project that will showcase your vision and talents. Materials and lab usage will be provided. Students of all backgrounds and levels of experience are welcome.

HONR 195 - Training Methodology: Ancient Spartans to Spartan Racers 2 credit hours. From ancient soldiers of Sparta and samurai of Japan, to marathon runners and triathletes, to today’s on-screen superheroes, explore the evolution of training methodology among athletes of varying concentrations throughout history, including the

physical regimens, nutritional guidelines, and mental approaches, designed to achieve maximum success.

HONR 196 - Your Brain on Nature 2 credit hours. Discover how engagement with the natural world affects how people think, their mental and physical health, and their overall well-being! We'll read and discuss research and theory on what is happening in the brain and body while a person interacts with nature, and we'll investigate the natural world around us to connect the course material to our lived experience here in Alfred. Students will seek out natural elements to bring to class for appreciation and evaluation, and we'll all be finding ways to interact with nature while reflecting on our experiences. There will be reading and reflective writing, discussion, and companionship in adventure, all accessible to various levels of skill and familiarity with the great outdoors.

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 fill a short questionnaire 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. NOTE: This seminar will meet 6:20-8:10.

HONR 198 - Parapsychology 2 credit hours. This course will examine and evaluate the psychological theories, phenomena, and explanations for paranormal experiences. These experiences include but are not limited to ghosts, alien abductions, telepathy and telekinesis, near-death experiences, dreams, communicating with the dead, out of body experiences, precognition, and demons. We will explore the psychological research relating to paranormal phenomena, with an emphasis on psychological explanations for such phenomena and examining the real-world impact of this research. Assignments will include weekly readings, participation in weekly discussions, 1-2 short reflection papers, and one final presentation on a paranormal phenomena of the student's choice.

HONR 199 - Sleep, Dreams and Nightmares 2 credit hours. Sleep is not only an important biological process, but also a clear channel to the subconscious, a time when our deepest fears and desires rise to the surface in the form of dreams. In this course, students will examine the science behind sleep, how humans have understood or explained this once-perplexing phenomenon historically through the arts and in literature, how dreams have appeared at pivotal moments in religious and cultural movements, and more.

HONR 204 - Credible Costumed Crusader Creation: The Science and Psychology of Superheroes 2 credit hours. From DC to the MCU, superheroes and supervillains have permeated our pop culture. In this class we'll explore whether mutations, alien powers, trauma, or badly conducted science can account for the range of abilities seen in comics and on the big screen. Students will engage in weekly missions to scour mainstream and fringe sources for evidence to discuss and "mythbust" these costumed creations. For a final project, students will design their own superhero or analyze someone from the multiverse.

HONR 206 - Screen Print & the T-Shirt 2 credit hours. This seminar will explore print through the lens of commercial use and application. Social media trends and

pop culture will enforce the practice as students explore various printing inks. Such inks include glow-in-the-dark, puff additive, fluorescent, and metallics, among others. Students will get a hands-on approach in all aspects of designing, stenciling, printing and reproduction. From printing on clothes to objects, we'll cover a variety of methods around Screen Print. We discuss color theory, practical design elements, Photoshop and all the current trends shaping modern Screen Printing. Materials and lab usage will be provided.

HONR 450 - Independent Study 1 to 4 credit hours.

HONR 480 - Senior Thesis 2 credit hours.

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 101L - Foundations of Officership Lab 1 credit hours.

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 102L - Basic Leadership Lab 1 credit hours.

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 201L - Individual Leadership Studies Lab 1 credit hours.

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 202L - Leadership & Teamwork Lab 1 credit hours.

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 301L - Leadership Problem Solving Lab 1 credit hours.

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 302L - Leadership and Ethics Lab 1 credit hours.

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 401L - Leadership and Management Lab 1 credit hours.

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)

MILS 402L - Officership Lab 1 credit hours.

MILS 450 - Independent Study 1 to 4 credit hours.

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.

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 106 - Beginning Pickleball 1 credit hours. This course will teach the basics of pickleball. Students will learn the fundamental skills of the sport as well as rules and key strategies.

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 122 - Foster Lake Experience 1 credit hours. This course will bring students to Foster Lake to experience the outdoors to hike and adventure as well enjoy lake activities such as but not limited to row boating, kayaking, canoeing, and stand-up paddle boarding. Other activities could be included depending on outdoor equipment available.

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 128 - Mindful Yoga 2 credit hours. Participants in this course will practice mindful yoga to promote greater strength, flexibility, awareness and relaxation. Classes will cultivate mindful attention and alignment techniques to maximize the benefits of the yoga poses and protect against injury on and off the mat and help students respond more skillfully to anxiety and stress.

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.

PFIT 135 - Tennis and Badminton 1 credit hours. This course is designed to teach the basic fundamentals and how to effectively play the sports of tennis and badminton.

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 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-Hunt 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.

VARS 117 - Varsity Sports: Baseball 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.

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

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 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 217 - Intro. to Ethno/Musicology 4 credit hours. This course will examine the study of music from the cultural and social aspects of the people who make it. The courses will use fact-based approach to music including its history, sociology and impact on society as well as literature surrounding musicology and ethnomusicology. This course is particularly useful for students with interests in cultural studies. No prior experience or knowledge is required.

ANTH 240 - Culture Through Film 4 credit hours. After examining the anthropological concept of culture, we will view and critically examine a wide range of films from around the world to see how they portray diverse insights about the cultures in which they are made.

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 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.

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 104 - Observational Astronomy 4 credit hours. A conceptual and visual introduction to planets, stars, galaxies, and nebulae. Positional astronomy, telescope function and operation, and the physics of matter and light are covered, and students make heavy use of Stull Observatory during lab hours.

ASTR 105 - Solar Systems 2 credit hours. An introductory survey of the science of planetary systems in general and in our own solar system in particular. Includes the nature of the specific objects in the Solar System – planets, asteroids, comets, etc. as well as the role of the Sun in the system. Also includes current theories of the origin, evolution and future of our system. This is placed in the more general context of what is known about planets around stars other than the Sun.

ASTR 106 - Stars, Galaxies, and Cosmology 2 credit hours. An introductory survey of the science of astronomical objects outside of our solar system. Topics will include the scientific method, how we observe the sky, interactions between light and matter, our sun, the life-cycle of stars, stellar remnants, exoplanets, galaxies, dark matter, and cosmology. Students will learn about the current theories of the processes that govern the universe and hopefully gain a deeper appreciation of the night sky.

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 - Advanced Astronomy Labratory 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 400 - Topics: Astronomy 1 to 4 credit hours.

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.

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 3 credit hours. This course provides a general overview of career opportunities in the allied health care professions and other health/wellness related fields. Emphasis is placed on the medical terminology used in the health care professions with reference to the systems of the body and application in the fields of health and human performance. In addition, this course introduces 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 119 - Training in First Aid/CPR-AED 1 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 and bleeding control. This course satisfies requirements for American Red Cross First Aid/CPR/AED certification. Each student must meet requirements to receive certification from the American Red Cross in order to successfully complete this course.

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 2 credit hours. Practical experience supervised by a Certified Athletic Trainer and/or physician at an on- or off-campus site. Students will be expected to gain experience at a secondary school setting that exposes them to youth athletics. Emphasis on advanced assessment, management, and rehabilitation for injuries to the lower and upper extremity to further develop clinical reasoning and decision making in regard to student-athletes/patients across the lifespan (specifically pediatric patients). A minimum of 125 clinical hours is required. Transportation to area affiliate clinical sites may be required. A lab fee may be assessed. Prerequisite: Formal retention within ATP, ATHT 202.

ATHT 302 - Clinical Experience in Athletic Training IV 2 credit hours. Practical experience supervised by a Certified Athletic Trainer and/or physician at an on- or off-campus site. Students will be expected to gain experience at an emergency room that exposes them to urgent and emergent conditions. Emphasis is on developing autonomy with emergency care procedures as well as observing immediate care for the non-orthopedic/non-sport population. A minimum of 125 clock hours is required. Transportation to area affiliate clinical sites may be required. A lab fee may be assessed.Prerequisite: Formal retention within ATP, ATHT 301

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 307 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 3 credit hours. The study of the basic biomechanical principles that govern human movement. An emphasis will be placed on the study of the structure and function of the skeletal, muscular, and neurological systems. Additional focus will be placed on the impact that mechanical components have on human movement, including an analysis of the motions and forces necessary for success in sport and exercise. Restrictions: Must be in the ATHT or HFMT major or instructor permission.

ATHT 393 - Physiology of Exercise 3 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 308 or permission of instructor.

ATHT 401 - Clinical Experience in Athletic Training V 2 credit hours. Practical experience supervised by a Certified Athletic Trainer and/or physician at an on-campus site. Students will be expected to gain experience with patient populations that expose them to orthopedic and non-orthopedic conditions. Emphasis on enhancing and refining student's clinical skills specific to prevention and wellness, urgent and emergent care, assessment and diagnosis, and therapeutic interventions to further the development of student autonomy. A minimum of 150 clinical hours is required. A lab fee may be assessed. Prerequisite: Formal retention within ATP, ATHT 302

ATHT 402 - Clinical Experience in Athletic Training VI 2 credit hours. This is a practice-intensive clinical education experience that gives students the opportunity to develop a better understanding and appreciation for the roles and responsibilities of an athletic trainer. In addition, students will be expected to gain experience at a primary care office that exposes a student to a variety of non-sport patient populations with a variety of conditions other than orthopedics. Emphasis is on developing the autonomy necessary to make informed decisions as it relates to the diagnostic and referral protocols for general medical conditions specific to the pediatric, adult, and elderly patient. A minimum of 150 clinical hours is required.Transportation to area affiliate clinical sites may be required. A lab fee may be assessed.Prerequisite: ATHT 401; Concurrent enrollment in ATHT 495

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 Methods in Athletic Training I 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.

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 324 - Phage Genomics 2 credit hours. This course introduces genomics through the annotation of a locally isolated bacteriophage. Students will gain experience with current genomics software while contributing to a nationwide research project to better understand bacteriophages. The course acts as the second installment of the SEA PHAGES program, started in Biol 155 Phage Discovery, however enrollment is open to all interested students. Generally offered each spring. Prerequisite: BIOL 150 or 155.

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.

BCHM 400 - Research Topics 4 credit hours.

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.

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.

BIOL 100 - Special Topics 1 to 4 credit hours.

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 115 - Introduction to Human Biology 4 credit hours. This course is designed to introduce individuals to the general concepts necessary to understand the human body, appropriate study techniques for science, and preparation for upper level biology courses. An introduction to anatomical language, general biochemical principles and cellular processes will be covered before reviewing selected body systems. The course will examine the general components and functions of the muscular, skeletal, nervous, cardiorespiratory, lymphatic, digestive, and urinary systems.

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 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 restricted to entering students in biology and biochemistry majors.

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. CHEM 105 & 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 324 - Phage Genomics 2 credit hours. This course introduces genomics through the annotation of a locally isolated bacteriophage. Students will gain experience with current genomics software while contributing to a nationwide research project to better understand bacteriophages. The course acts as the second installment of the SEA PHAGES program, started in Biol 155 Phage Discovery, however enrollment is open to all interested students. Generally offered each spring. Prerequisite: BIOL 150 or 155.

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 into the principles behind animal behavior with a primary focus on how animals interact withother animals and their environment. And a secondary focus on how humans have positively andnegatively impacted animal populations, and vice versa. Prerequisite: BIOL 211

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.

BIPY 485 - Practicum or Internship 1 to 4 credit hours.

BIPY 499 - Thesis 1 to 4 credit hours.

CHEM 105 - General Chemistry I 3 credit hours. A systematic study of the fundamental principles, theories and calculations involved in chemistry, focusing on basic concepts of bonding & bonding theories, the Periodic Table, states of matter, stoichiometry, gases and the Ideal Gas Law, thermodynamics, and types of reactions.

CHEM 105L - General Chemistry I Laboratory 1 credit hours. A survey of basic chemical laboratory techniques. Techniques include gravimetric analysis, colorimetric analysis, and titration. Laboratory work includes experiments dealing with stoichiometry, qualitative analysis, and quantitative analysis.

CHEM 106 - General Chemistry II 3 credit hours. A continuation of the systematic study of the fundamental principles and calculations involved in chemistry: focusing on kinetics, equilibria, acid-base chemistry, redox reactions and electrochemistry, thermodynamics, and a brief introduction to organic and nuclear chemistry. Prerequisite: CHEM 105/105L.

CHEM 106L - General Chemistry II Laboratory 1 credit hours. A survey of basic chemical laboratory experiments pertaining to qualitative analysis, kinetics, electrochemistry, and synthesis. Techniques include gravimetric analysis, colorimetric analysis, the use of calibration curves, and titration. Includes a laboratory practical exam that evaluates students' ability to perform the covered laboratory techniques and the identification of unknown ions in aqueous solution.

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 315L - Laboratory-Organic Chem I 1 credit hours. Students practice techniques essential for organic synthesis, characterization, and purification including: melting point acquisition, recrystallization, liquid-liquid extraction, analysis by thin layer

chromatography, and distillation. Students learn how to troubleshoot reactions, perform several syntheses, and gain experience interpreting spectral data.

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 316L - Laboratory-Organic Chem II 1 credit hours. Students collaboratively conceive, design, and carry out research experiments based upon their interests as they relate to organic chemistry and/or laboratory techniques learned in the first semester lab course. By the end of the semester, students will collaborate on a research proposal, the associated lab work, and both a written and oral report of the project.

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 340 - Physical Chemistry-Quant. Mech 3 credit hours. This semester of our physical chemistry sequence covers quantum mechanics and spectroscopy, with a focus on atomic structure, the history of quantum mechanics, and practical examples of spectroscopy. Offered every year. Prerequisite: CHEM 106, MATH 152, PHYS 112 or 126.

CHEM 341 - Physical Chemistry Lab 1 credit hours. This course explores concepts in thermodynamics, kinetics, and quantum mechanics through six laboratory experiments performed as teams in a simulated research environment.

CHEM 342 - Physical Chem - Thermodynamics 4 credit hours. This semester of our physical chemistry sequence covers thermodynamics from a combined classical/ statistical perspective, with a focus on entropy and equilibrium concepts, as well as applications of chemical kinetics.

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 and ligand field theory, organometallic reactions and mechanisms, catalysis, solid state chemistry, and bioinorganic chemistry.Generally offered (Spring). Prerequisite: CHEM 340 or CEMS 235.

CHEM 374 - Inorganic Chemistry Laboratory 1 credit hours. Experiments will be performed to demonstrate the synthetic techniques used in modern inorganic chemistry to synthesize coordination compounds, polymers, and liquid crystals. Inert atmosphere techniques such as using the Schlenk Line, the glove bag, and the glove box will be covered. Co-requisite or Pre-requisite: CHEM 372. Pre-requisite: CHEM 106

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 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)

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 primarily focused on mastering instrumental techniques such as NMR, FTIR, and

GCMS to characterize organic compounds through discovery labs and solving independent unknowns. Co-requisite: CHEM 423. Prerequisite: CHEM 321 and CHEM 340 or equivalent.

CHEM 485 - Internship in Chemistry 1 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 1 credit hours. Taken in the final semester of a student's AU studies. Students, working with Division Faculty, prepare and orally defend a portfolio demonstrating their professional preparedness. Representative examples this growth are: research, attending research lectures/meetings, preparing a C.V. and presenting lectures/posters.

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 300 - Special Topics 2 to 4 credit hours. Subject matter not covered in other courses. Topics vary from one semester to another.

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.

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 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.

CLAS 102 - FYE Portfolio 0 credit hours. Through reflective writing, new CLAS first-year students examine their college experience and explore what it means to be a student in the College of Liberal Arts and Sciences at Alfred University.

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)

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.

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.

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. Shifts in media technologies, corporate structure and the organization of public life have transformed the practice of journalism. This course explores journalism’s changing role in society, offering conceptual and practical tools. Students will learn the basic reporting and writing skills needed by all media professionals against a broad background of media law, history, and global diversity.

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. Digital Video Production focuses on merging practical video production techniques with the art of creative storytelling, facilitating collaboration in group-based projects. Students explore various modes of digital content creation, including thematic montage, narrative shorts, documentary filmmaking, and a capstone project.

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. (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.

CRIM 200 - Special Topics 1 to 4 credit hours.

CRIM 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/SJST 110.

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 332 - Focusing on Police 2 credit hours. This course gives students an in-depth analysis of police operations. Discussions are centered on police operations and the social process involved in police-citizen contacts. Prerequisite: SOCI 245.

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 344 - Sociology of Deviance & Criminal Behavior 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/CRIM 344)

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.

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. Prerequisite: CSCI 156

CSCI 206 - Algorithm Design 4 credit hours. This course studies Algorithm 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 Fall)

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. Prerequisite: CSCI 156

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 will be covered if time permits. Prerequisite: MATH 181 or MATH 281. (Cross-listed as MATH 305) (Offered Fall, even 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. Prerequisite: CSCI 156

CSCI 400 - Special Topics 1 to 4 credit hours. Special topics in computer science which may vary from year to year. Prerequisite: Permission of the department.

CSCI 425 - Operating Systems 4 credit hours. This course covers the basics of modern operating systems, beginning with an overview of what constitutes an operating system in the modern era. Course topics also include file systems, processes, inter-process communication, process scheduling, memory management, virtual memory (from a software perspective), security, concurrency, and virtualization. Examples of these concepts are examined in contemporary operating systems. Prerequisite: CSCI 225

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.

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 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 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 Applications 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 engage students in active learning and support learning differences in the classroom; become familiar with appropriate strategies to assess the diverse learning 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 and Assessment in the Early Childhood/Childhood Classroom 3 credit hours. This course considers the early childhood/childhood classroom: challenges, opportunities and best practices. Participants will explore assessment practices--both traditional and non-traditional--as well as classroom management techniques, teacher expectations, modeling, and awareness, and the socialization process for birth-sixth grade aged children. The course will emphasize the holistic alignment of content, instruction, and assessment in the curriculum and 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.

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 103 - Business Writing 4 credit hours. In this course, we'll focus on writing to persuade, decide, and get things done. We'll cover the basic principles of writing effectively in professional contexts in order to prepare both for more advanced coursework and for doing business in the real world. Prerequisite: ENGL 101

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 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 - Literature in Action: Drama, Self, & Society 2 or 4 credit hours. An exploration of how plays express the struggle humans face in relation to their community, to their history, and to the languages—literary, political, cultural, personal—that make up those conflicts. We will read plays from different eras and a series of innovative modern plays.

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 218 - Beyond Enchantment: Fairy Tales as Literature 4 credit hours. For many, if not most of us, the phrase “fairy tales" conjures up images of Disney Princesses, of castles, and magic, and talking animals, and happily ever after. But fairy tales in the Western literary tradition have always been far from innocent. They are instead a complex literary and story-based mirror of the cultures from which they originated, both reinforcing and rebelling against gender, class, and social norms. We will read multiple versions of the tales from the earliest known versions to versions in the present day, learning to approach them from a literary, historical, sociological, psychanalytic, and feminist point of view.

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 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 271 - Trauma and Creativity 4 credit hours. Trauma causes pain—grief, anger, and withdrawal—yet there are those who respond with creativity—with acts and art of expression, originality, connection, and transcendence. This course studies that process, and representative works of literature that reveal it.

ENGL 272 - Mysticism 4 credit hours. Mysticism is the word given to the recognition —across cultures, centuries, and continents—that everything is ultimately One. Some name this God…others, Truth…many call it Love. Although the intensity and depth of mystical vision is consistently described as inexpressible, an extensive, beautiful body of literature has been created by those who have travelled the “via mystica,” experienced Union as absolute reality, and shared their experiences. This course will study the characteristics of mysticism, and the ways various writers have translated their revelations, Love, and “peace beyond understanding” into art.

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 - Topics in Literature 1 or 4 credit hours. Advanced study of a topic in literature not covered by other 400-level courses.

ENGL 401 - Topics in Writing 1 to 4 credit hours. Advanced study of a topic in writing not covered by other 400-level courses.

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 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 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 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 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 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 460 - Major Figures in Literature 2 to 4 credit hours. Seminar course. Detailed examination of the work produced by a single major writer (or of two writers linked by genre, period, topic, or other context).

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 476 - Writing the Long Poem or Poetic Sequence 4 credit hours. This creative writing course explores long poems and poetic sequences by reading and analyzing examples, then using those models to create our own poems. Through workshop and revision, students will write either a long poem or sequence of shorter poems. Prerequisite: ENGL 328 or one 200-level creative writing course (ENGL 200-206).

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.

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 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)

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 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)

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.

EQUS 100 - Special Topics 2 to 4 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. Transportation is not provided to the Equestrian Center. Arranging transportation to the Equestrian Center will be the responsibility of the student, however, we will assist in the arrangement of ride sharing to the Equestrian Center.

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. Transportation is not provided to the Equestrian Center. Arranging transportation to the Equestrian Center will be the responsibility of the student, however, we will assist in the arrangement of ride sharing to the Equestrian Center.

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. Transportation is not provided to the Equestrian Center. Arranging transportation to the Equestrian Center will be the responsibility of the student, however, we will assist in the arrangement of ride sharing to the Equestrian Center.

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. Transportation is not provided to the Equestrian Center. Arranging transportation to the Equestrian Center will be the responsibility of the student, however, we will assist in the arrangement of ride sharing to the Equestrian Center.

EQUS 105 - Introduction to Dressage 2 credit hours. Open to students with intermediate experience in the English disciplines. Dressage is offered to equip students with a broad base of knowledge in classical horsemanship encompassing theory, philosophy, riding, and care of the horse. Students will be introduced to the basics of training level dressage. Prerequisite: EQUS 102 or permission of instructor. Transportation is not provided to the Equestrian Center. Arranging transportation to the Equestrian Center will be the responsibility of the student, however, we will assist in the arrangement of ride sharing to the Equestrian Center.

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. Transportation is not provided to the Equestrian Center. Arranging transportation to the Equestrian Center will be the responsibility of the student, however, we will assist in the arrangement of ride sharing to the Equestrian Center.

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. Transportation is not provided to the Equestrian Center. Arranging transportation to the Equestrian Center will be the responsibility of the student, however, we will assist in the arrangement of ride sharing to the Equestrian Center.

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. Transportation is not provided to the Equestrian Center. Arranging transportation to the Equestrian Center will be the responsibility of the student, however, we will assist in the arrangement of ride sharing to the Equestrian Center.

EQUS 118 - Advanced Horsemanship 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. Transportation is not provided to the Equestrian Center. Arranging transportation to the Equestrian Center will be the responsibility of the student, however, we will assist in the arrangement of ride sharing to the Equestrian Center.

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. Transportation is not provided to the Equestrian Center. Arranging transportation to the Equestrian Center will be the responsibility of the student, however, we will assist in the arrangement of ride sharing to the Equestrian Center.

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. Transportation is not provided to the Equestrian Center. Arranging transportation to the Equestrian Center will be the responsibility of the student, however, we will assist in the arrangement of ride sharing to the Equestrian Center.

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. Transportation is not provided to the Equestrian

Center. Arranging transportation to the Equestrian Center will be the responsibility of the student, however, we will assist in the arrangement of ride sharing to the Equestrian Center.

EQUS 125 - Competition Show Jumping 2 credit hours. Designed for the advanced rider who wants to further riding skills by jumping more technical and demanding courses. Riders are given the opportunity to participate in local recognized and unrecognized shows in the jumper divisions, as well as shows at the Equestrian Center. Prerequisite: EQUS 103 or permission of instructor. (PE requirement)

EQUS 200 - Special Topics 1 to 4 credit hours. An open theory/classroom course varying in content from year to year. Transportation is not provided to the Equestrian Center. Arranging transportation to the Equestrian Center will be the responsibility of the student, however, we will assist in the arrangement of ride sharing to the Equestrian Center.

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 their mount and know that particular horse's abilities, habits and limits. An asset to show preparation. Prerequisite: EQUS 105 or 113 or equivalent.

EQUS 202 - Advanced Reining 2 credit hours. This course is designed for the advanced rider who wants to become more proficient in riding reining horses. It will provide practical experience in learning advance skills necessary for executing reining maneuvers. Lecture topics will include: advanced knowledge and observation of reining maneuvers, condition/training of the horse needed to compete in reining, health and safety issues related to reining, and the shoeing needs of reining horses. Lab skills will include: training horses to better execute loping circles, lead departures, lead changes, spins, run downs, sliding stops, and rollbacks.

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. Transportation is not provided to the Equestrian Center. Arranging transportation to the Equestrian Center will be the responsibility of the student, however, we will assist in the arrangement of ride sharing to the Equestrian Center.

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. Transportation is not provided to the Equestrian Center. Arranging transportation to the Equestrian Center will be the responsibility of the student, however, we will assist in the arrangement of ride sharing to the Equestrian Center.

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. Transportation is not provided to the Equestrian Center. Arranging transportation to the Equestrian Center will be the responsibility of the student, however, we will assist in the arrangement of ride sharing to the Equestrian 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. Transportation is not provided to the Equestrian Center. Arranging transportation to the Equestrian Center will be the responsibility of the student, however, we will assist in the arrangement of ride sharing to the Equestrian Center.

EQUS 220 - History of the Horse 4 credit hours. Theoretical and practical experience in understanding the history and the evolution of the horse. Meets at Continental Acres Equine Resort in Weirsdale, FL in the first two weeks of Summer School. With access to the Gloria Austin Equine Museum, students have hands-on opportunities while studying the history of the horse and museum operations. (Summer)

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. Transportation is not provided to the Equestrian Center. Arranging transportation to the Equestrian Center will be the responsibility of the student, however, we will assist in the arrangement of ride sharing to the Equestrian Center.

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. Transportation is not provided to the Equestrian Center. Arranging transportation to the Equestrian Center will be the responsibility of the student, however, we will assist in the arrangement of ride sharing to the Equestrian Center.

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. Transportation is not provided to the Equestrian Center. Arranging transportation to the Equestrian Center will be the responsibility of the student, however, we will assist in the arrangement of ride sharing to the Equestrian Center. Travel to Ireland for 10 days is a required part of the course.

EQUS 300 - Special Topics 1 to 4 credit hours.

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.

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 400 - Special Topics 1 to 4 credit hours.

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 208 - Francophone Queer Voices 4 credit hours. This course engages with works by contemporary queer authors, film makers, artists, and singers from France and Francophone countries (Algeria, Morocco, Ivory Coast, etc.). We will identify the concerns of this generation and discuss their place and visibility in society. Readings, films, and class discussions will provide students with the concepts and terminology to understand, discuss and analyze the experiences of queer individuals today. Please note: the course touches on topics of a potentially sensitive nature and includes some sexually explicit materials. Course is in English.

FREN 300 - Special Topics 1 to 4 credit hours.

FREN 301 - Advanced French Conversation 4 credit hours. Intensive practice in speaking French, with particular attention to the French sound system. Topics for conversation are taken from contemporary French journals, newspapers, films, etc. Prerequisite: FREN 202 or permission of instructor.

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 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 316 - Contemporary French Culture 4 credit hours. Introduction to the most important elements of present-day French culture, literature, film, art, and music. Recent history and politics, economics and social structure; religion, family, cuisine, and customs. Readings and discussions in French. Prerequisite: FREN 202 or permission of instructor. (Alternate years)

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 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.

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 231 - Climate Change Mechanics 4 credit hours. Students will learn the fundamentals of processes in the land, atmosphere, oceans, and cryosphere: the components making up the global climate. This framework will provide the basis for an investigation of what happens when one of these components is perturbed, including theoretical repercussions and actual measured data from the past and present on both a global and regional scale. Prerequisite: Any 100 level ENVS or GEOL course. (Offered: Alternate Falls)

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.

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 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 208 - Francophone Queer Voices 4 credit hours. This course engages with works by contemporary queer authors, film makers, artists, and singers from France and Francophone countries (Algeria, Morocco, Ivory Coast, etc.). We will identify the concerns of this generation and discuss their place and visibility in society. Readings, films, and class discussions will provide students with the concepts and terminology to understand, discuss and analyze the experiences of queer individuals today. Please note: the course touches on topics of a potentially sensitive nature and includes some sexually explicit materials. Course is in English.

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 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)

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 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.

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)

GREK 101 - Koine Greek I 4 credit hours. This course is a standard introduction to Koine Greek. Specifically, this course is primarily concerned with writing Koine Greek and translating Greek passages from the Greek translation of the Jewish scriptures,

the Greek Christian scriptures, the Church Fathers, as well as selected writings from the historians Josephus and Philo of Alexandria. The course content for Koine Greek I includes: writing and pronouncing the Greek alphabet, pronunciation of Greek words, formation and translation of the first, second, and third declensions, formation and translation of the entire active, passive, and middle indicative verbal systems of ? and µ? verbs, the relative pronoun, and the formation and translation of the present participle.

GREK 102 - Koine Greek II 4 credit hours. This course is a continuation of Koine Greek I. Like Koine Greek I, this course is primarily concerned with writing Koine Greek and translating Koine Greek passages from the Greek translation of the Jewish scriptures, the Greek Christian scriptures, the Church Fathers, as well as selected writings from the historians Josephus and Philo of Alexandria. The course content for Koine Greek II includes: the formation and translation of participles, the formation and translation of the subjunctive mood, the formation and translation of the optative mood, the formation and translation of the imperative, the translation of articular infinitives, and the formation and translation of conditional statements. The course will conclude by translating extremely extended passages from multiple sources. Prerequisite: GREL 101 or permission of instructor.

GREK 450 - Koine Greek I 4 credit hours.

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 201 - German III 4 credit hours. Continuation and further development of basic skills learned in GRMN 102. Includes introduction to short fiction and a review of grammar. Prerequisite: GRMN 102, 61% or higher on German Language Placement Exam, or permission of instructor. (II)

GRMN 202 - German IV 4 credit hours. Continuation of reading exercises and grammar review from GRMN 201. Further development of listening and speaking skills. Prerequisite: GRMN 201 or permission of instructor. (II)

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.

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 308, 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 308, 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 308 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.

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 1492, with particular emphasis on exploring both how the West changed the World and how the World changed the West through colonialism, imperialism, war, ideologies, racial thinking, and religious change.

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 130 - Aztecs, Incas, and Conquistadors: Colonialism in the Americas 4 credit hours. This course begins with the Aztec and Incan Empires and ends with the wave of independence movements that transformed the Americas into a continent of nations free from colonial rule. We will explore the developments, structures, and ideologies of European colonialism in the Americas, as well as the ways in which indigenous peoples and free and enslaved Africans navigated colonial rule. (Offered-Spring)

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 153 - Modern Latin American History 4 credit hours. This course explores major developments in nineteenth and twentieth century Latin American History. Topics include independence, slavery, political conflicts, revolutions, class movements, populism, state terrorism and dirty war, democratization, migration, and the influence of Latin America on the 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 - Early US History 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 - Modern US History 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 223 - German History into the 21st Century 4 credit hours. This course explores German history from the earliest evidence of the Germanic tribes through developments in the most recent decade in Germany.

HIST 232 - African Kingdoms-Egypt-Kongo 4 credit hours. A survey of the origins of human civilization, African Kingdoms, and globalization of the continent up to 1800.

HIST 235 - African American History Since 1863 4 credit hours. Placing Black lives at the center of US history, this course traces the innovations, contributions, art,

literature, struggles, setbacks, and triumphs of African Americans in the past, from the Emancipation Proclamation to the Black Lives Matter movement.

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 304 - Historian's Craft: The Past 2 credit hours. In this methods course, students analyze the fundamentals of the historical profession. These include conducting archival research, understanding historiography (the history of history), and crafting original arguments. By specifically examining the historicization of the Second World War and the Holocaust, students will learn to consume full-length books quickly and effectively, work with archival sources, and craft captivating arguments.

HIST 305 - Historian's Craft: The Future 2 credit hours. How does historical knowledge get produced and shared in public? This project-based course explores forms of writing and educating beyond the halls of academia. Topics may include: podcasting, K-12 teaching, museums, monuments, digital mapping, digital archives, blogging, and social media. Open to all majors at all levels.

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 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 330 - Southern Africa: Between Mandela and Mugabe 2 credit hours. This course examines the last two hundred years of Southern African history, politics, and culture. From Angola, east to Zimbabwe and Mozambique, south to South Africa, attention will be devoted to perennial African kingdoms, European colonization, African nationalism and Pan-Africanism, resistance to apartheid regimes, and liberation and independence movements.

HIST 340 - Ukraine: Between Putin and the West 2 credit hours. This course examines Ukraine’s tumultuous history, from its Kievan Rus’ origins a millennium ago, through its first founding as a nation state in 1917, to the present. Ukraine’s ethnic, religious, and linguistic diversity has been its strength and weakness. Pulled between East and West, democracy and authoritarianism, Ukraine has struggled to find its place between European and the world powers.

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 370 - US History Through Film 4 credit hours. How do the stories we see on screens shape society? Using popular and influential films as primary sources, this course explores the relationships between the business of Hollywood and ideas of labor, gender, war, justice, democracy, and the American dream.

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 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 388 - Empire and Nation in Eastern Europe 4 credit hours. This course explores the far-flung reaches of Europe, from the Balkans to the Baltic Sea, the Carpathians Mountains to the Caucasus. Beginning with the Revolutions of 1848, topics examined include the emergence of Czech and Ukrainian national identities, the collapse of the Austro-Hungarian and Ottoman empires during WWI, interwar right-wing authoritarianism in Poland and Hungary, partisan warfare in Yugoslavia during WWII, communist dictatorship in Romania, the fall of the Berlin Wall and "Iron Curtain," and integration of post-communist states into Western institutions like NATO and the EU. (GP)

HIST 391 - Looting Europe: How Hitler Stole the Continent's Art 4 credit hours. While studying in Munich, Stuttgart, and Heidenheim, learn about German history through the art, monuments, and architecture Nazi leader Adolf Hitler revered, despised, and looted. At the Kunstmuseum Stuttgart, view the paintings of German First World War soldier Otto Dix, branded “degenerate” and banned by the Nazis. Experience the medieval town of Rothenburg ob der Tauber, touted by Hitler as a Germanic exemplar. In Munich, walk through the Alte Pinakothek and other art museums that Hitler frequented in his early years, then trace the steps of those persecuted and interned by the Nazis at the Dachau Concentration Camp. Finally, learn about the liberation of prisoners from Hitler’s camps, stolen artworks, and their postwar fate in Heidenheim, where a Jewish Displaced Persons camp was established by the U.S. Army. (Offered: Allen/Winter)

HIST 410 - Writing History 4 credit hours. Become a published history writer in the Kanakadea Review, AU's history journal. Organize and present at a campus conference. In this course students will learn to conduct original research, write accurately and reliably, and give confident presentations. Successful completion of this course will equip students with essential skills for any profession and bolster their CV/ resume.

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.

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.

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.

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.

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 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 181 - Discrete Mathematics 4 credit hours. The objective of this course is to recognize and understand the use of discrete structures in computer science. This class will introduce sets, relations, functions, logic, proofs, counting, probability and graph theory with an emphasis towards applications in computer science.

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 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.

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 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 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 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 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)

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.

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 324 - Mathematical Methods in Physics 3 credit hours. An introduction to the mathematical techniques used throughout intermediate and advanced courses in physics, including matrix algebra, complex variables and exponentials, ordinary differential equations by inspection, boundary value problems and partial differential equations by separation of variables, and Fourier and power series solutions. Prerequisite: Math 253 and PHYS 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 3 credit hours. This course presents Schrodinger's theory of quantum mechanics culminating in the solution of the hydrogen atom. Includes origin of the quantum theory, wave-particle duality, uncertainty relations, harmonic oscillators, symmetries, conservation laws and angular momentum. Prerequisite: PHYS 324 and PHYS 326, or permission of instructor.

PHYS 402 - Quantum Mechanics II 3 credit hours. Continuation of Quantum Mechanics I. After a full discussion of spin and addition of angular momentum, various approximate methods are developed and applied to real systems, including variational and WKB methods, perturbation theory, and scattering theory. The Dirac equation and quantum electrodynamics are also discussed. Prerequisite: PHYS 401 and MATH 371, or permission of instructor.

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 415 - Nonlinear Dynamics & Chaos 3 credit hours. A first course in nonlinear dynamics, culminating in the emergence of chaos innonlinear systems. Major topics include bifurcations, phase plane analysis, fractals, and strangeattractors. Applications are drawn from physics as well as a wide variety of fields throughout thenatural sciences, engineering, and social sciences. Prerequisite: MATH 271 and PHYS 126.

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 126 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: PHYS 126 and 324 or permission of instructor. (Offered on demand)

PHYS 424 - Electricity and Magnetism I 3 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: PHYS 126 and 324 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 - Electricity & Magnetism II 3 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 326 and 424. (Offered on demand)

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 150 - 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 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 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 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 310 - Executive Branch Institutions 4 credit hours. Who really runs the federal government? It may not be who you think. The administration, the bureaucracy, and the“deep state” are various names given to the nebulous group of agencies and

departments that employs more than 2million Americans and works under the Executive Branch. They enforce and write the details of all federal laws. Thiscourse peels back the curtain on how these institutions keep the country running, how Americans can participate more inthis process, and how they interact with each other, Congress, courts, the president, interest groups and more. Offered every third semester. Prerequisite: POLS 110

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 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)

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 332 - Judicial Processes 4 credit hours. The theory and practice of judicatory systems with primary emphasis on Anglo-American judicial processes and problems.

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 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 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.

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. 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 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. Prerequisite: PSYC 101.

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. Prerequisite: PSYC 101 & 221.

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 270 - Fundamentals of Neuropsychology 4 credit hours. This is a non-laboratory course dealing with the neurological correlates and determinants of behavior. Emphasis will be placed on basic neuroanatomy and neurophysiology underlying human behavior, i.e., the physical basis of movement, sensation, perception, emotion, motivation, learning, memory, and language. Prerequisite PSYC 101 - 4 credit hours. Note open to students who have taken PSYC 330 (Offered Fall/Spring)

PSYC 273 - Psychology of the African American Experience 2 to 4 credit hours. This course explores the Black and African American experience from the perspective of psychological and social science. The course utilizes Black Psychology, Africana Studies, Critical Race Theory, and Sociology to examine the nature of Black and African American experiences. (Offered - Spring)

PSYC 280 - Applied Neuropsychology 2 to 4 credit hours. This course will focus on the biological bases of sleep & dreaming, gender & sexual behavior, obesity and weight control, and common neurological disorders such as ADHD, Alzheimer’s disease, autism, and epilepsy. Prerequisite: PSYC 101, 340 (Offered Fall/Spring)

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 to 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 221.

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 340 - Adverse & Protective Childhood 2 to 3 credit hours. This course will explore how adverse childhood experiences (ACEs) can negatively influence development contributing to both physical and mental illnesses. It will also explore how protective and compensatory experiences (PACEs) can mitigate the detrimental effects of adverse ones. Information from a broad range of fields will be discussed, including child psychology, parenting, psychopathology, neuropsychology, health psychology, medicine, and sociology. Prerequisite: PSYC 101 (Offered- Fall/Spring)

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 360 - Topics 2 credit hours.

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 381 - Animal-Assisted Therapy 3 credit hours. This course will provide an introduction to animal-assisted therapy which is relevant to the field of psychotherapy/ counseling and human growth and learning. Participants will explore the nature of the human-animal bond, the role and effect of companion animals on human functioning, the theoretical foundations for the inclusion of animals in mental health treatment, and various animal-assisted activities, interventions, and therapy models espoused by various professional organizations. Participants will review the scientific literature in the AAT field and participate in experiential activities in order to develop an understanding of the strengths and limitations of these treatment approaches with specific client populations. Attention will be provided to the legal and ethical implications of animal-assisted work, especially related to the differences between service animals, emotional support animals, and therapy animals. Basic training protocols for the human-animal partnership with dogs and horses will be addressed. Prerequisite: PSYC 101 and 210.

PSYC 382 - Equine-Assit. Psychotherapy 3 credit hours. This course will provide an interdisciplinary introduction to Equine-Assisted Psychotherapy (EAP), an experiential psychotherapy approach that incorporates horses in the treatment of social-emotional and behavioral problems in human beings. Course participants will explore the theoretical foundations and underlying assumptions of this hands-on treatment approach, identify the role and function of each treatment team member, and apply the principles of EAP to practical problems. The course format will include direct instruction, class discussions, and lab activities with all activities taking place during the scheduled class time at the Equestrian Center. Prerequisite: PSYC 101, 210, and 381

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. Prerequisite: PYCS 101, 221, 222, or permission of instructor.

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, PSYC 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.

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 252 - Judaism and Islam 4 credit hours. Introductory comparative course highlighting similarities and differences of the two religious traditions. Topics include sources and meanings of revelation, legal theories and ritual structures that uphold community, religious experience through worship and mysticism, and philosophical interpretations. (B) (GP) (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.

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 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.

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.

SIGN 101 - American Sign Language 4 credit hours. Development of conversational fluency in ASL. Students will accurately recognize and produce ASL with appropriate non-manual behaviors and grammatical features. Development of linguistic/cultural behaviors conducive to the deaf community and awareness of, and respect for deaf culture. Receptive and expressive skills are fostered.

SIGN 102 - American Sign Language II 4 credit hours. Continued development of conversational fluency in ASL. Emphasis on the production and comprehension of increasingly complex linguistic expressions through dialogue and conversation. More complex receptive and expressive skills are fostered through interactive ASL lessons and participatory activities.

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 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 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 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)

SJST 208 - Francophone Queer Voices 4 credit hours. This course engages with works by contemporary queer authors, film makers, artists, and singers from France and Francophone countries (Algeria, Morocco, Ivory Coast, etc.). We will identify the concerns of this generation and discuss their place and visibility in society. Readings, films, and class discussions will provide students with the concepts and terminology to understand, discuss and analyze the experiences of queer individuals today. Please note: the course touches on topics of a potentially sensitive nature and includes some sexually explicit materials. Course is in English.

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)

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 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 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)

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 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 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)

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 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 & Criminal Behavior 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 349 - Sociology of Health, Illness & Dis/ability 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.

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 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 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 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.

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.

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)

SJST 461 - Special Topics Seminar 1 to 4 credit hours. In this course topics in Social Justice Studies are explored. Topics vary from term to term.

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)

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 236 - Cults, Religions, and Fandom 4 credit hours. "A scientific approach to the study of religions and cults, and their mechanisms for social control. What is a 'religion'? What is a 'cult?' What kinds of people are drawn to them? What function(s) do

cults serve in society? What are the differences between cults, religions, and fandom? Should society be concerned about blurred lines between them? Prerequisite: SOCI 110 or ANTH 110 and junior or senior standing, or permission of instructor. (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/SJST 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 300 - Special Topics 2 to 4 credit hours.

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 & Criminal Behavior 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 & Dis/ability 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)

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 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 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.

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)

SPHS 101 - Introduction to Sports and Health Sciences 3 credit hours. This course will provide the student with an introduction to the field of sports and health sciences. Topics include career opportunities, ethics and standards of care, medical language and communication skills, mechanisms of injury, prevention strategies, recognition and common treatment methods of injury, fitness and conditioning assessments, fundamentals of rehabilitation, sport-specific populations, and special populations.

SPHS 102 - Medical Terminology 2 credit hours. This course will provide the fundamental knowledge of medical terms needed to prepare for a career as a health care professional. Students can expect to learn word origin and structure, prefixes, suffixes, word roots, abbreviations, symbols, surgical procedures, medical specialties, diseases and treatments, and diagnostic procedures associated with each system in the human body.

SPHS 103 - Foundations of Sport Injury and Illness 3 credit hours. This course is designed to provide students with foundational medical and scientific knowledge associated with sport injury and illness, including an introduction to clinical anatomy, the characteristics of musculoskeletal trauma, the processes of tissue healing, and the signs and symptoms associated with the most common injuries and illnesses seen in the athletic and physically active populations. This course is also intended to provide students with basic concepts that encompass prevention, risk-management, recognition and evaluation, acute care, treatment, and referral of sport injury and illness.

SPHS 111 - Emergency Care in Health and Human Performance 3 credit hours. This course provides students with an introduction to the application of basic life support techniques necessary for the recognition and management of traumatic and catastrophic injuries or conditions. The primary objective of this course is to provide students with the concepts and skills associated with immediate and emergency care, including CPR, rescue breathing, and care of choking victim in conjunction with first aid techniques such as using a sling, splinting, and bleeding control. This course satisfies requirements for American Red Cross Professional Rescuer Certification. Each student must meet requirements to receive certification from the American Red Cross in order to successfully complete this course. Prerequisite: SPHS 102

SPHS 190 - Principles of Strength Training and Reconditioning 2 credit hours. This course is intended to cover the essential scientific principles of strength training and reconditioning. Emphasis is placed on the exercise sciences (i.e., anatomy, exercise

physiology, and biomechanics) and nutrition while providing students with experience in testing and evaluation, program design, exercise technique, and organization and administration. Prerequisite: SPHS 392 or SPHS 393 or permission of instructor.

SPHS 211 - Orthopedic Assessment I 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 sports related injuries to the lower extremity sustained by physically active individuals. Normal joint kinematics and subsequent pathomechanics will also be discussed. Prerequisite: SPHS 103 or permission of instructor.

SPHS 212 - Orthopedic Assessment II 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 sports related injuries to the upper extremity including the head, neck, and spine that are sustained by physically active individuals. Normal joint kinematics and subsequent pathomechanics will also be discussed. Prerequisite: SPHS 221 or permission of the instructor

SPHS 222 - Nutrition for Health and Human Performance 2 credit hours. This course presents the scientific basis for sports nutrition emphasizing basic nutritional concepts, energy expenditure during resistance and endurance exercise, the diet during training, the timing and composition of the pre- and post-competition meals, the use of nutrients, supplements, and ergogenic/ergolytic aids, and the special nutritional needs of various athletic groups. The course provides practical information for the competitive athlete and people of all ages wishing to incorporate nutrition into an active, healthy, lifestyle.

SPHS 231 - EMT Basic I 3 credit hours. This course is designed to provide students with the resources and education for the level of Emergency Medical Technician-Basic. This course also includes the skills necessary for the individual to provide emergency medical care at a basic life support level with an ambulance or otherspecialized service. This course satisfies requirements for American Red Cross Professional Rescuer Certification. Each student must meet requirements to receive certification from the American Red Cross in order to successfully complete this course. This course meets half of the criteria standards for entry to state and national EMT-basic certification examinations. Prerequisite: SPHS 102

SPHS 232 - EMT Basic II 3 credit hours. This course is designed to provide students with the resources and education for the level of Emergency Medical Technician-Basic. This course also includes the skills necessary for the individual to provide emergency medical care at a basic life support level with an ambulance or otherspecialized service. This course meets the 2nd half of the criteria standards for entry to state and national certification examinations. Successful completion of this course will enable students to register for the New York State and National Registry certification exams to become an EMT-Basic. Prerequisite: SPHS 231

SPHS 301 - Clinical Experience in Sports Health and Sciences I 2 credit hours. This is a practice-intensive clinical education experience supervised by a certified athletic trainer at a campus affiliated site that gives students the opportunity to develop a better understanding and appreciation for the roles and responsibilities of a sports medicine professional working within a Division-III collegiate sports medicine department or secondary school athletic department. Prerequisite: SPHS 111 or SPHS 231

SPHS 303 - Prevention and Care Strategies for Sport Injury and Illness 2 credit hours. This course introduces students to prevention and care strategies associated

with sport injury and illness, including specific didactic information in applied anatomy, exercise physiology, nutrition, biomechanics, and fitness and wellness, as well as practical skills for administering a preparticipation examination, fitting protective equipment, and applying prophylactic devices. The primary objective of this course is to provide students with the knowledge and skills in injury prevention and wellness promotion needed to optimize the overall health and quality of life for patients involved in sport and physical activity. Prerequisite: SPMD 103 or permission of instructor.

SPHS 310 - Orthopedic Procedures 2 credit hours. The course's core objective is to educate sports medicine majors in orthopedic evaluation and diagnostic knowledge and skills with specialized training in the orthopedic clinical setting. The course will build on the concepts, foundations and principles of physical examination and rehabilitation and expand to extra attention will be given to procedures including but not limited to: joint / soft tissue injections, upper and lower extremity casting and splinting, wound closure, diagnostic radiograph interpretation, and exposure to orthopedic surgical techniques. Prerequisite: SPHS 212

SPHS 320 - Psychosocial Strategies Sports 2 credit hours. This course is designed to provide a basic understanding of the psychology of sport, injury, and rehabilitation. Topics covered include emotion, motivation, mental skills training, psychological antecedents of injury, psychology of injury and rehabilitation, career transition and termination, disabilities, rehabilitation/exercise adherence, eating disorders, alcohol and drug/substance abuse, gender and cultural diversity, and research methods related to the psychology of sport, injury, and rehabilitation. Prerequisite: PSYC 101

SPHS 350 - Therapeutic Interventions 4 credit hours. This course is designed to provide students with an introduction to the integrated application of therapeutic exercise, motor function training, physical agents, and manual therapy techniques to minimize future risk, improve recovery and return to activity outcomes, and enhance performance for patients engaged in physical activity. The primary objective of this course is to provide students with the concepts and skills of rehabilitation needed to develop, optimize, and administer effective evidence-based plans of care for patients. While specific pathologic rehabilitations will be discussed, the intention is for students to be able to manipulate the basic variables and concepts to create patient-oriented rehabilitation protocols of their own design. Prerequisite: SPHS 212 or instructor permission.

SPHS 392 - Biomechanics 3 credit hours. The study of the basic biomechanical principles that govern human movement. An emphasis will be placed on the study of the structure and function of the skeletal, muscular, and neurological systems. Additional focus will be placed on the impact that mechanical components have on human movement, including an analysis of the motions and forces necessary for success in sport and exercise. Prerequisite: BIOL 307 or permission of the instructor.

SPHS 393 - Physiology of Exercise 3 credit hours. Integrating the concept of learning over time, this course is designed to review and provide a more detailed explanation of the physiologic processes that the body undergoes during physical stress and exercise. Focus will be given to testing concepts and administration, nutrition and diet in exercise, and the body’s physiologic and physical response to exercise and recovery. Prerequisite: BIOL 308

SPHS 395 - Strength Training and Reconditioning Techniques 2 credit hours. This course is intended to cover the practical skills and fundamental exercise techniques associated with strength training and conditioning. Emphasis is placed on ensuring safe

and productive technique of evidence-based exercises that target muscular strength, endurance, power, speed, agility, stability and balance, and hypertrophy. Prerequisite: SPHS 190 or (Co-requisite SPHS 190) or instructor permission.

SPHS 401 - Clinical Experience in Sports Health and Sciences II 1 to 2 credit hours. This is a practice-intensive clinical education experience supervised by a strength and conditioning coach, athletic trainer, physical therapist, occupational therapist, physician assistant, physician, or other allied healthcare professional at a campus affiliated site that gives students the opportunity to develop a better understanding and appreciation for the roles and responsibilities of a professional working in the health care setting, and with the patient populations, that align with their professional interests. Transportation to area affiliate clinical sites may be required. Prerequisite: SPHS 301

SPHS 402 - Clinical Experience in Sports Health and Sciences III 2 to 3 credit hours. This course is designed to allow students to apply the theories, concepts, and competencies discussed in the classroom to carefully selected and supervised practical situations or simulated experiences. This advanced clinical experience may be supervised by a strength and conditioning coach, athletic trainer, physical therapist, occupational therapist, physician assistant, physician, or other allied healthcare professional at an on- or off-campus affiliated site. Transportation to area affiliate clinical sites may be required. Prerequisite: SPHS 401

SPHS 410 - Medical and Pharmacological Aspects in Sports Medicine 3 credit hours. This course is designed to expose students to the necessary recognition, treatment, and referral strategies for general medical conditions affecting athletes and physically active individuals. Topics include recognition of signs/symptoms, pathology, assessment and management strategies, the application of pharmacological agents, advanced knowledge of medical terminology, differential diagnosis, diagnostic testing, and common medical procedures associated with various medical conditions. Prerequisite: SPHS 301

SPHS 432 - Organization and Administration of Athletics 2 credit hours. An in-depth study of organizational, administrative, and management theories and practices for entry-level healthcare and fitness professionals. Topics include: organizational planning, financial resource management, human resource management, facility design and management, risk management, insurance systems, and legal considerations. Prerequisite: Must be of Junior standing.

SPHS 459 - Research Methods in Sports Health and Sciences 2 credit hours. This course is designed to introduce students to the importance and process of conducting research in the field of Sports Medicine. Students will also develop the knowledge and skills for solving clinical problems using evidence-based medicine. Prerequisite: SPHS 301

SPHS 470 - Capstone in Sports and Health Sciences 1 credit hours. This is a course that culminates the knowledge and skills a student has gained in the multidisciplinary areas of the sports medicine major and focuses on the final preparations for a career in sports medicine or to continue their education towards an advanced degree. Prerequisite: SPHS 459

SUST 101 - Introduction to Sustainability 4 credit hours. An introductory course examining our use of natural resources in the context of ecological limits. We will examine the environmental and social consequences arising as we approach and exceed these limits. We will learn to evaluate solutions to these consequences and

discuss broader changes to how we view our environmental and social responsibilities. (Fall Term)

UNIV 086 - Fiat Success Seminar 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 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 208 - Francophone Queer Voices 4 credit hours. This course engages with works by contemporary queer authors, film makers, artists, and singers from France and Francophone countries (Algeria, Morocco, Ivory Coast, etc.). We will identify the concerns of this generation and discuss their place and visibility in society. Readings, films, and class discussions will provide students with the concepts and terminology to understand, discuss and analyze the experiences of queer individuals today. Please note: the course touches on topics of a potentially sensitive nature and includes some sexually explicit materials. Course is in English.

WGST 219 - Musical Reorientations 4 credit hours. Reorientation is a process of changing directions; figuring out, again, where you are in relationship to your environment. This discussion-based course explores music and sound through such relational thinking, foregrounding the multitude of ways of being-in-the-world. We will explore musical works, histories, composers, performers, and sound-experiences, through concepts drawn from feminism, gender studies, and queer theory. Through critical readings and listening, as well as sharing our own experiences, we seek to question normative narratives around music and sound.

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 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 300 - Special Topics 1 to 4 credit hours. Topics vary in content from term to term.

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 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)

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)

WGST 349 - Sociology of Health, Illness & Dis/ability 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.

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 360 - Topics in Women's and Gender Studies 1 to 4 credit hours. Topics vary in content from term to term.

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 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 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)

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 100 - Special Topics in Art 2 to 4 credit hours.

ART 101 - Foundations 1: Looking to Understand 4 credit hours. Foundations 101 concentrates on observational drawing as the translation of visual perception onto the two-dimensional plane. This act of translation - from eye to hand- transforms looking into critical knowledge. Being fully present in this process will be emphasized. Themes of the object, the landscape, and the figure will be explored, and conventional drawing tools and materials will often be employed within these themes.

ART 102 - Foundations II: Drawing Permutations 4 credit hours. Foundations 102 decodes the act of drawing in the second dimension into further dimensions: volumetric, time-based and speculative. It draws upon the specific lenses through which drawing is viewed amongst the Schools of Art and Design's divisions. Students will thus touch and engage with a wide variety of materials in this course: digital and time-based methods, sculptural materials, and non-traditional materials and processes will all be explored. Prerequisite: ART 101.

ART 103 - Color 2 credit hours. Foundations 103 is an intensive, half-semester workshop-style course that explore more advanced notions of color. This second semester of the two-semester Foundations sequence is more acutely focused on research's role in a student's work and their individual artistic voice. While still staying true to Alfred Foundations' embodied studio art curriculum, these courses require students to further consider their role in the contemporary art world. This course, 103, addresses color across media; looking to ideas centered in traditional color theory while exploring more contemporary and experimental applications of color. Students will develop a rich understanding of using color to approach narrative, formal and conceptual ideas within art-making. Offered each spring. Prerequisite: ART 101 and 102.

ART 104 - Form & Fabrication 2 credit hours. Foundations 104 is an intensive, half-semester workshop-style course that explores more advanced notions of form. This second semester of the two-semester Foundations sequence is more acutely focused on research's role in a student's work and their individual artistic voice. While still staying true to Alfred Foundations' embodied studio art curriculum, these courses require students to further consider their role in the contemporary art world. Form and Fabrication, 104, will focus on making three-dimensional artwork using traditional and experimental materials and methods. Projects and processes will employ research, tools and materials to explore conceptual ideas along with principles of design and fabrication. Students will engage with materials including clay, cement, glues and binders, plaster, wood, organic materials and textiles. Students will gain experience communicating their ideas and further develop their ability to use language to analyze their own artwork and the work of others. Students will be encouraged to broaden their vision and challenge their preconceived notions of artmaking. Offered each spring. Prerequisite: ART 101 and 102.

ART 105 - Image 2 credit hours. Foundations 105 is an intensive, half-semester workshop-style course that explores more advanced notions of the image. This second semester of the two-semester Foundations sequence is more acutely focused on research's role in a student's work and their individual artistic voice. While still staying true to Alfred Foundations' embodied studio art curriculum, these courses require students to further consider their role in the contemporary art world. The Image course, 105, guides students to enhance image literacy through image creation, image appropriation, and transformative aspects of imagery using a wide range of research skills and daily practice. This section includes observational drawing, mechanical (re)production including printmaking, and transforming created images via time-based tools. Offered each spring. Prerequisite: ART 101 and 102

ART 106 - Time & Space 2 credit hours. Foundations 106 is an intensive, half-semester workshop-style course that explores more advanced notions of making time-based work. This second semester of the two-semester Foundations sequence is more acutely focused on research's role in a student's work and their individual artistic voice. While still staying true to Alfred Foundations' embodied studio art curriculum, these courses require students to further consider their role in the contemporary art world. The Time and Space course, 106, will be experimental - allowing students to make videos using vintage film stock and/or hand drawn animations. No prior experience with computers will be needed for this workshop and students will receive individual help with technology they might struggle with or even "hate." Offered each spring. Prerequisite: ART 101 and ART 102.

ART 111 - Drawing for Non-Art Majors 4 credit hours. Studio work in painting and drawing. A general course for beginners investigating the individual's ideas in various media.

ART 121 - Sculpture for Non-Majors 4 credit hours. A course focusing on idea development, using both traditional and nontraditional three-dimensional materials.

ART 122 - Glass Studio for Non-Majors 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 133 - Photography for Non-Majors 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 151 - Ceramics for Non-Majors 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 161 - Printmaking for Non-Majors 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 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 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 202 - Introduction to Modeling and Mold-making 4 credit hours. This course focuses on understanding mold-making processes and the development of castable forms. Students use clay, plaster, wood, masonite, and paper as source materials for mold fabrication. (Fall and Spring)

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) Prerequisite: ART 102

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. This design studio course focuses on expanding your artistic visual language and studio practice using digital media. Design is explored as form, ideas, process, and craft. Students work with a variety of digital tools and technologies in the Expanded Media computer studio using Illustrator, Photoshop, and InDesign applications. Course work is accompanied by demonstrations, critiques, and discussions.

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 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 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 Video and Sonic Arts 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 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 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 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 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 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 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 - Technical Metal Fabrication 2 credit hours. This course will teach artist and designers thorough technical knowledge of materials and equipment in the SOS metal fabrication shop. Introducing various forms of welding, cutting, bending, and finishing for metal fabrication projects.

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 295 - Technical Glassblowing 2 credit hours. The 'Technical Glassblowing' practicum will focus on achieving consistent results in the hot-shop. Students will learn to master foundational shapes with efficiency. Confidence gained through choreography and repetition will also nourish conceptual works in other courses. (Offered Fall/Spring)

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 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 304 - The Figure in Ceramic Sculpture 4 credit hours. This course introduces a range of approach to the body and figuration with clay and ceramic technologies. Students will explore sculptural methods based in observation, engage anatomical studies of skeletal and muscular systems through models and drawing, animating gesture in space with material, installation and collaboration. Students are encouraged to pursue topics and research pertinent to them and their understanding of their own bodies, identities and positions in culture.

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 310 - Ceramics: Hybrid Vessel II 4 credit hours. Continuation of ART 308-Ceramics: Hybrid Vessel I. Prerequisite: ART 201, 202, or 203.

ART 312 - ExpressiveTypography 4 credit hours. This studio course explores letters, words. and typography as expressive and emotive elements of art and design. Typography is explored as content concept, form, and craft. Work is created using Illustrator. Photoshop. and lnDesign applications. Students produce work using scanners, large fonnat printers. the laser engraver/cutter, the vinyl cutter, and/or the fabric printer in the Expanded Media computer studio. Projects encourage combining hand-made and digital media. Course work is accompanied by demonstrations, critiques, and discussions.

ART 314 - Junior Design Studio: The Graphic Impulse 4 credit hours. Junior Design Studio forefronts experimental approaches to graphic design, with an emphasis on form and format. Students advance their knowledge of typography, visual organization, hierarchy of information, and sensitivity to content, form, function, and context. Students build on existing technical skills, research methods, and are introduced to a variety of outputs for production, including the Risograph Duplicator. Work is produced in both print and digital media, with additional consideration for installation, distribution, activation, as well as ideas surrounding publics (and counter-publics). Design projects will encourage hybridity amongst the varied disciplines housed within the division of Expanded Media. Prerequisite: one of ART 213, 225, 232, or 285 (or instructor’s permission). Two prior courses in Design, Video/Sonic, or Print Media Studio are recommended. May be taken up to four times for credit. (Fall and Spring).

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 323 - 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 324 - Contemporary Photographic Practice 4 credit hours. This class will explore the role of the contemporary photographer as maker, critic, activist, and organizer. Students will survey a range of contemporary photographers as a catalyst for their own exploration/experiments. Assignments will encompass darkroom & digital processes, archival image appropriation, slideshow performance, installation/sculpture, image/text, and other strategies to enrich and broaden each student's developing photographic practice. Prerequisite: ART 218.

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 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 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 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 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 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 traditional and non-traditional neon technology. The course examines neon's potential for sculptural expression within the cc of contemporary art. Students will learn all stages of design, making, processing of neon tube wiring and safe installation of artworks. Generally offered (Spring). Concurrent enrollment with ART 369. Prerequisite: ART 255 and 262.

ART 364 - Glass Casting 4 credit hours. An in-depth study of mold-making and firing theory for kiln- and hot-cast glass sculpture. Processes include traditional and new technologies: alginate and rubber molds for lost-wax kilncasting, and sand, Zircar, and CNC milled graphite molds for casting molten glass from the furnace. Skills will be applied in pursuit of concept-driven personal expression. (Spring) Prerequisite: ART 262 or ART 255

ART 368 - Light and Mixed Media 4 credit hours. The course examines the sculptural potential of light and mixed media within the context of contemporary art. Emphasis is placed on material poetics and the tension between contrastin materials when creating artworks. Students will explore the aesthetic and conceptual potentia of different light-emitting technologies light, including but not limited to neon, projection LEDs. Corequisite: ART 369. Prerequisite ART 255 and 262.

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 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 376 - Casting Glass and Metal Sculpture 4 credit hours. This team-taught class explores the possibilities of casting glass, metal and mixed media at the National Casting Center. Fundamentals in mold making, casting and finishing are explored. Conceptual development is fostered and combinations of materials and processes are encouraged.Students have access to both the metal foundry and glass casting facilities during this course.

ART 377 - Playful Objects 4 credit hours. Play, like art, is a space for imagination, community, and questioning. By experimenting with flexible, kinetic, tactile, and

electronic materials, students will explore the overlaps between art and play and how they intersect with politics, identity, and history. Prerequisite: ART 255.

ART 380 - Alfred Summer Ceramics 1 to 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 385 - Internship 1 to 4 credit hours.

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 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 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 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 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 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 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 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 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.

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.

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)

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 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 is required by all BFA candidates in the final year of their undergraduate education. The emphasis is to provide a concentrated period for students to receive mentoring from faculty and peers

as they push a body of works towards their final semester thesis exhibition. Through the semester, students meet rotationally either in a group setting for critiques, or one-on-one for individualized studio visits with their faculty mentor. There is a critical writing component.

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 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.

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.

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 - Medieval Visual Culture 2 credit hours. This course surveys medieval visual culture from Late Antiquity to the end of the Middle Ages. Examining the art, architecture, and material culture across Europe, themes considered may include multiculturalism, empire building, iconoclasm, gender, patronage, pilgrimage, ritual, and secular life.

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 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 1 to 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 focuses on arts of the Mughal Empire to now, including architecture, painting, sculpture, courtly and popular arts, and photography. Students will consider how ancient forms of art and culture endure into the 21st century; examples include yoga, tantra, ceramics, metalwork, textiles and more.

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 308 - Ceramics in Japan & Beyond 4 credit hours. A survey of Japanese ceramic objects and practice from prehistory to the present. Focus is on materials, techniques, aesthetics, and networks of makers, producers, and patrons. Also includes the study of Japanese influences on ceramics globally. Generally offered (Spring)

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 326 - Medieval Materiality 4 credit hours. This course explores how medieval art and architecture in Europe (ca. 500-1500) was shaped by the materials and techniques used to create it, and the status and working practices of its makers. Materials considered include: Ivory, parchment, was, clay, and glass. Generally offered once per year.

ARTH 330 - From Revolt to Revolution - 18th Century Art in Europe 4 credit hours. This course will survey European art and architecture of the eighteenth century focusing on selected cultural centers. It will study developments in painting, sculpture, prints, ceramics and architecture in the context of the formation of major institutions responsible for the development of the modern concepts of art and artist toward the inception of the modern art world.

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 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 346 - History of Modern Design 4 credit hours. The history of product and graphic design, focusing primarily on Europe and North America from the Industrial Revolution to the present. Particular emphasis will be placed on design in response to changes in society, politics, and technology.

ARTH 347 - 1989 and After 4 credit hours. This course tracks the "global turn" in art history and within contemporary artistic practice since 1989 with a particular focus on social upheaval, political transformation, and diasporic identity.

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 353 - Global Hangover 4 credit hours. In the aftermath of WWII. the Cold War tried to divide the world into two camps in a binary opposition. This course will investigate the profound and global impact it has had on contemporary art. in and

beyond the Eastern and Western blocks, and the long shadow it has cast that reaches into our day.

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 356 - Modern Ceramics in Europe and North America 4 credit hours. Histories and theories of ceramic art, craft and design from the late 19th century to the present in Europe and North America. with a particular focus on the Arts and Crafts movement, Modernism and Postmodernism. Generally offered (Spring).

ARTH 367 - Landscape Across Cultures 4 credit hours. This course takes a broad interpretation of “landscape” as the springboard for an examination of land, space, site, and place in the visual arts, across cultures, geographies, and time periods. We will view a wide variety of differing cultural understandings of landscape as a way of considering how we, as humans, inhabit, interpret, and impact our world. Generally offered once per year.

ARTH 373 - Materiality in Experimental Film and Video Art 4 credit hours. This course traces the material nature of experimental film and video art, including handmade cinema, avant-garde film, computer art, algorithmic media, etc.

ARTH 391 - Looting Europe: How Hitler Stole the Continent's Art 4 credit hours. While studying in Munich, Stuttgart, and Heidenheim, learn about German history through the art, monuments, and architecture Nazi leader Adolf Hitler revered, despised, and looted. At the Kunstmuseum Stuttgart, view the paintings of German First World War soldier Otto Dix, branded “degenerate” and banned by the Nazis. Experience the medieval town of Rothenburg ob der Tauber, touted by Hitler as a Germanic exemplar. In Munich, walk through the Alte Pinakothek and other art museums that Hitler frequented in his early years, then trace the steps of those persecuted and interned by the Nazis at the Dachau Concentration Camp. Finally, learn about the liberation of prisoners from Hitler’s camps, stolen artworks, and their postwar fate in Heidenheim, where a Jewish Displaced Persons camp was established by the U.S. Army. (Offered: Allen/Winter)

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 415 - The Persistence of Painting 4 credit hours. The seminar inquires about the conditions that make possible painting's persistence as a vital artistic medium and practice. Students develop an understanding of the conditions underlying the persistence of painting as a medium and practice by studying the approaches and strategies employed by both its participants and selected artists who have made significant contributions. It will help clarify some of the reasons for the privileged position that has presumably held in the ecology of art. (Offered - Fall)

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 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 462 - Making, Writing 4 credit hours. This course examines the relationship between making and writing in contemporary art. We will read, dissect, and discuss a spectrum of recent texts by artists, critics, and literary authors. In addition to these class conversations, students will be asked to regularly write short exercises and engage in weekly critiques. Over the span of the semester, students will improve their writing and produce a finished professional text in the form of a critical essay or artist proposal. This is a course that is geared to upper-division and graduate-level students and encourages enrollment from across all media and disciplines, including craft practices and performing arts.

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 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)

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)

Division of Performing Arts Courses

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 212 - Walking the Walk: Creativity, Perception and Walking 2 credit hours. In this course we will explore walking in relationship to perception, the body, the creative process, and place both in the rural and natural environment.

DANC 214 - Embodied Anatomy 2 credit hours. This embodied anatomy class will investigate anatomy and kinesiology by weaving, embodied experience with anatomical study. Students will learn traditional anatomy (bones, muscles, joints) through multiple sensate experiences.

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 227 - African Dance 2 credit hours. This course studies selected West African dance forms and development of skills through studio experience. It covers the artistic and educational uses of traditional African dances. It requires reading, along with experiencing the recreational value of the traditional African dance styles.

DANC 230 - Improvisation/Composition I 4 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 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 4 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 4 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 2 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 2 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 - 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 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 - Music Theory I 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 135 - Class Guitar I 2 credit hours. This course introduces students to the guitar and develops basic skills toward performance on the instrument. It will cover right and left-hand techniques, chords, scales, harmony, and rhythm, etc. students will learn to read a variety of musics which include standard notation, chord charts, and tablature. We will explore these techniques and concepts through a variety of musical styles.

MUSC 136 - Class Guitar II 2 credit hours. This course reinforces and builds upon the Class Guitar I course. This course teaches students to develop skills toward performance on the instrument. It will cover hand techniques, chords, scales, harmony, and rhythm, etc. Students will learn to read a variety of music which includes standard notation, chord charts, and tablature. Students will explore techniques and concepts through a variety of musical styles.

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 205 - SOUND GATHERING: Music, Sound, and Environment 2 credit hours. Alongside fieldwork, students will learn basic recording techniques, engage in theoretical readings - drawn from ecomusicology and sound studies - and classroom discussions directed towards the creation of individual and/or group sound

compositions/projects. These compositions can be imagined in a multitude of creative ways, including podcasting, sound art/essays, visual arts, dance/movement arts, songwriting, etc. The course will culminate in a sound composition 'performance' exhibition. No special expertise or equipment is needed, and guidance with audio editing programs is built into the course.

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 Popular Music 4 credit hours. This survey 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 2 credit hours. This survey course traces the history and development of film music through lecture, reading and film viewing. We discuss how music and its relationship to film have changed over the last century, and 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 217 - Introduction to Musicology & Ethnomusicology 4 credit hours. This course will examine the study of music from the cultural and social aspects of the people who make it. The courses will use fact-based approach to music including its history, sociology and impact on society as well as literature surrounding musicology and ethnomusicology. This course is particularly useful for students with interests in cultural studies. No prior experience or knowledge is required.

MUSC 218 - Musical Infrastructures 2 credit hours. Musical experiences, somehow, often escape materiality. Listeners tend to focus on the way music makes them feel, and its study is often grounded in the socio-cultural ideologies of musical genre and style. Yet, music relies on material infrastructures in how it is produced, consumed, and disseminated. This ensemble of listening-artists' investigates such musical infrastructures, tracing the complex supply chain networks that make up our modern musical experiences. Through readings, listening, and exploratory sound-art projects we will re-trace these musical-material chains, rethinking our involvements with musical production and consumption.

MUSC 219 - Musical Reorientations: 4 credit hours. Reorientation is a process of changing directions; figuring out, again, where you are in relationship to your environment. This discussion-based course explores music and sound through such

relational thinking, foregrounding the multitude of ways of being-in-the-world. We will explore musical works, histories, composers, performers, and sound-experiences, through concepts drawn from feminism, gender studies, and queer theory. Through critical readings and listening, as well as sharing our own experiences, we seek to question normative narratives around music and sound.

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 221 - Musical Infrastructures 2 credit hours. This course investigates musical infrastructures; complex and shifting intersections of material, ideological, economic, and political realities that make up our musical experiences. Through readings, listening, and exploratory sound-art projects we will re-trace these musical-material chains, rethinkingconventional notions music as affect, instead, grounding musical life within infrastructural reality. Generally offered each Spring.

MUSC 225 - Western Music History I 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 240 - Songwriting and Composition 2 credit hours. Students will develop a technical understanding of songwriting and musical composition through analysis of pre-existing musical materials, styles, and genres. Students will apply knowledge gained from analysis toward composing their own original music. Techniques such as orchestration, voice leading, functional harmony, timbral analysis, and rhythmic notation will be considered. Offered Fall/Spring.

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. Open to all, including community members: no experience required. Note: Ensembles may be repeated for credit to a maximum of 10 credit hours

MUSC 272 - Encore Choir 2 credit hours. Vocal ensemble of 20-30 singers, performs a wide variety of repertoire in concerts on and off campus. Open to all including members of the community: no experience required 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 279 - Chamber Music 1 to 2 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 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 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 - Music Capstone-Research 1 credit hours. Music Capstone Research provides an opportunity for students to engage in high-level inquiry focusing on an area of specialization within the profession. Capstone research will be inquiry and practice centered, drawing upon areas of interest to the student in music sub-fields

such as: music history/theory composition, performance, sound design, and music and technology; or in intersectional areas outside of music like business, psychology, communications, or copyright law, among others. All capstones aim to bridge theory and practice and are intended to have an impact on the professional life of students. The overall goal of the course is to facilitate the development of Capstone Projects/ Performances that further the student on their individual career trajectories.

MUSC 496 - Music Capstone: Performance/Presentation 2 credit hours. The final Capstone Project represents the culmination of intensive practice, original research, and/or compositions that will make a meaningful contribution to knowledge in the student's development and career trajectory. Students should have begun topic selection and work for their final Project/Performance early in their previous Capstone Research semester(s). Ideas should be discussed and explored with their applied professor and their major advisor. Written work on a research document, lecture-recital, program notes, or portfolio commentary may begin only after their previously submitted Capstone Research document/program/performance notes have been approved by the faculty committee. Prerequisite: MUSC 495.

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 4 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 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.

PDAT 229 - Transforming Fabric 4 credit hours. This exploratory textiles course will study historical and contemporary methods for adding color and surface design to textiles using strictly Natural Dyes, with an emphasis on simple techniques and tools to achieve deceptively complex, beautiful, and environmentally sound and uniquely individual fabrics. Offered every 3rd semester.

PDAT 231 - Prop Design and Construction 2 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 2 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 271 - Performance Design Practicum 1 credit hours. A lab course designed to give students practical performance design experience under faculty supervision in the areas of technical theatre and design. Typically, by assisting with design work. Prerequisite: Permission of instructor.

PDAT 272 - Performance Tech Practicum 1 credit hours. A project based course designed to give students practical technical production experience under faculty supervision in costuming, scenic, lighting, sound, and projection. Typically through work in the costume, scene shop, and theatres.

PDAT 273 - Performance Mgmt. Practicum 1 credit hours. A practicum course designed to give students practical experience under faculty supervision in stage management, production operations, and front of house. Permission of instructor required. (Offered:

PDAT 278 - Costume Design - Practicum 1 credit hours. Students will continue collaborating with choreographers, costume shop manager and other designers as the designs they created in the previous semester come to life on stage. Students will experience first hand the challenges and opportunities of the production process and grow as designers as they navigate communication with the rest of the team. Offered in Spring. Prerequisite: PDAT 228

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 2 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 2 credit hours. A study of the aesthetic qualities of light lights significance in the context of space and story. Students will learn the process of developing a concept and meeting production needs through to a lighting design. Students will learn how to create a lighting design package and paperwork and technically plan a lighting design. Prerequisite: PDAT 220 & 224.

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 370 - Advanced Play Production 2 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 1 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 450 - Independent Study 1 to 4 credit hours.

PDAT 495 - Senior Project 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 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. (C)

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 4 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 and the Art of Production Collaboration 4 credit hours. A lecture course on the fundamentals of stage management and the practice of collaborating with performing art practitioners. Understanding the communication and logistic skills needed to successfully guide a production from conception to show and strike. (Offered: Fall term)

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 241 - Vocal Production for Theatre 2 credit hours. Exercises and techniques to free the voice and improve projection, resonance, and articulation. Covers international phonetic alphabet and standard stage speech.

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 251 - Theatre Colloquium 1 credit hours. This once-per-month class is designed as a forum for majors and minors to discuss progress andchallenges in coursework and production, and broader issues in the theatre industry, to support the students' progress as artists. Prerequisite: Must be a Theatre Major or minor. (Offered - Fall/Spring)

THEA 270 - Play Production 2 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 - Classical World Theatre: History, Art, Politics & Society 4 credit hours. An examination of the development of Classical theatre and it's place within cultures in the West and around the world, from earliest times through around 1850. 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; and of broader inter- and intra-cultural relationships.

THEA 312 - Modern and Contemporary World Theatre: History, Art, Politics & Society 4 credit hours. An examination of Modern and Contemporary Theatre's place in many world cultures, from around 1850 to the present. This course examines different aesthetic and historical movements in theatre, along with different cultural contexts, content and performance styles. Prerequisite: THEA 311

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 4 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 370 - Advanced Play Production 2 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 4 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 450 - Independent Study 1 to 4 credit hours.

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.

Kazuo Inamori School of Engineering Courses

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 305 - Computational Materials 2 credit hours. Computers have the capability of solving problems in ways that the human mind cannot and as a result they have the capability of radically speeding up the process of material discovery. In this course we will cover simulation and artificial intelligence techniques for discovering new materials.

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 326 - Natural Glasses 3 credit hours. Project focused research around the topic of Natural glasses, from literature research, to characterization or synthesis in the lab, to evaluation and writing of a scientific paper. Depth will depend on the students' background and the composition of the class.

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 409 - Methods for Fourier Transform Infrared Spectroscopy 1 credit hours. Fourier Transform Infrared Spectroscopy is a highly useful technique in characterization of materials. We will review the basic theory of Fourier transforms, fundamentals of digital sampling and data acquisition, and then get an in-depth look at experimental methods, material sampling types, and the operation of actual spectrometers. Prerequisite: MATH 151, CHEM 106/106L, CEMS 235, CEMS 344.

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 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 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 460 - Biology for Engineers 3 credit hours. This course focuses on aspects of human biology that are more directed towards engineering students needs for a career in the medical field. This course covers the principal aspects of cell biology, anatomy and physiology, infection and immunology, microbiology, pathology and restorative dentistry. Human systems and the associated biology will be discussed with respect to the prevalence in surgical treatment and repair. Students will learn to understand the complex systems in biology that are highly interconnected, and how these biological systems respond to changes on both short-term and long-term time scales

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 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.

ELEC 210 - Digital Logic 4 credit hours. Number systems, conversion, module-N arithmetic and digital coding techniques. Boolean algebra and minimization techniques. Combinational and sequential logic design; registers and counters; memory and programmable logic devices.

ELEC 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.

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 310 - Microprocessor Systems and Applications 4 credit hours. Microcomputer components, registers, buses, and memory systems, machine instructions, machine language arithmetic, assembly language, microprocessor interfacing. Prerequisite: ELEC 210.

ELEC 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/ELEC 220.

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.

ELEC 354 - Device Electronics 3 credit hours. Semiconductor devices and circuits. Unipolar. bipolar, and MOS devices. Introduction to amplifiers, oscillators, and filters. Prerequisite: MATH 271.

ELEC 355 - Power System Operations 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. Topics such as power system control, reliability, and distribution system are covered. Prerequisite: MATH 271 & 253; ENGR 220, RNEW 320.

ELEC 356 - Electronic Circuits 4 credit hours. Analysis and design of small signal and large signal electronic amplifiers. Frequency response, feedback, operational amplifiers. Prerequisite: ELEC 354.

ELEC 422 - Control Systems 3 credit hours. Linear feedback control system modeling analysis, and compensation techniques. Prerequisite: ELEC 322.

ELEC 433 - Modern Electrical Grids and Electricity Markets for 100% Renewable 1 credit hours. Modern Electrical Grids and Electricity Markets for 100% Renewable Energy course provides a general overview of the operation of the electrical grid as

well as electricity markets in order to provide students with a general framework for identifying specific technical and economic challenges to maintaining grid reliability on grids that generate electricity with large amounts of renewable energy.

ELEC 441 - Advanced Power Electronics 1 credit hours. Power electronics course provides essential knowledge for applications in modern power systems. Course contents include: switch-mode power conversion, steady state in switching converters, ideal switches, power device characteristics including wide bandgap devices; DC-DC converters; buck, boost, buck-boost, Cuk and SEPIC converters; full bridge and dual-active bridge and other soft switching topologies; different current modes of operation; power management; PWM schemes; and applications in EV chargers, motor drives, solar/wind harvesting technologies.

ELEC 442 - Applied Electromagnetism 3 credit hours. Complex vectors, Maxwell's equations, uniform plane waves, reflection and transmission of waves, waveguides and resonators, transmission lines, antennas, special topics in waves, electrostatic fields, electric force and energy, special techniques to solve electromagnetic equations, direct currents, magnetostatic fields, magnetic circuits, electroquasistatic fields, magnetoquasistatic fields, examples of applications. Prerequisite: PHYS 126, MATH 271.

ENGR 100 - Special Topics 1 to 3 credit hours.

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 107 - Machine Shop Training 1 credit hours. The "Machine Shop Training" course is designed to give the students the necessary training required to take "MECH 366: Manufacturing" and is required for any student who plans on using shop equipment in the future for school projects or clubs. There is a hands-on laboratory course which covers machining practices and topics such as shop safety, material properties, precision measurement, blue print reading, and Geometric Dimensioning and Tolerances.

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 116 - Explorations in Mechanical Engineering 1 credit hours. An "Engineering Exploration" course focusing on mechanical engineering. This hands-on laboratory

course covers data collection, analysis and reporting. First-year engineering students enroll in two different "Engineering Exploration" courses.

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 125 - Precision Agriculture 2 credit hours. This course begins by introducing students to the basics of drone functions and flying. While learning to fly effectively with and without GPS, students will gain an understanding of the safety and operational requirements necessary to successfully complete the FAA Unmanned Aircraft General test to become fully-licensed drone pilots. In addition to learning to fly drones, students will gain an understanding of how drones can be deployed for commercial use with an emphasis on drone deployment in agriculture.This year-and-a-half course will provide students with opportunities to perfect their flying, study career opportunities with drones, and gain the knowledge necessary to pass the FAA Unmanned Aircraft General test. Independent study of topics, collaboration as part of a drone team, and hands on flight experience will prepare students for the real world of drone operation and the beginning of a career in drones.

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 200 - Special Topics 2 to 4 credit hours.

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 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 300 - Special Topics in Engineering 1 to 4 credit hours.

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 330 - Renewable Energy in Power Grid Systems 2 credit hours. Students conduct renewable energy related projects in various industrial settings. They develop a systematic view for power grids with renewable energy sources integrated in power generation, transmission/distribution, storage, and consumption. The first component of the course is delivered in a classroom setting, covering contemporary issues and industrial practices. The second component of the course is an internship. Work for a company and/or travel to the company would be required.

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)

ENGR 385 - Internship 1 to 3 credit hours. Students who have completed an internship in an engineering field can take this course to earn credit for that experience (4 weeks of 40 hrs per week = 1 credit hour). Must be Sophomore standing.

ENGR 388 - Applied Complex Variables 3 credit hours. Complex numbers, algebra, functions and integration. Taylor and Laurent series, theory of residues, conformal mapping, and the Schwarz-Christoffel transformation. Applications to fluid dynamics, electrostatics and electrical machines. Impulse functions. Applications to Fourier transforms and the inversion of the LaPlace transform. Some linear algebra and matrix theory introduced as needed for an understanding of dynamic systems. Prerequisite: MATH 271.

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 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 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. Junior or senior standing and approved Plan of Study required.

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 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 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 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.

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 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.

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 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.

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 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 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 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.

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 or ELEC 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 355 - 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. Topics such as power system control, reliability, and distribution system are covered. Prerequisite: MATH 271 & 253; ENGR 220, RNEW 320.

RNEW 400 - Special Topics 1 to 3 credit hours. Special topics in renewable energy engineering which vary from year to year.

RNEW 410 - Advanced Power Systems 3 credit hours. This course covers steady and transient-state analysis and controls of power systems. Steady-state analysis such as power flows, optimal power flows, and unit commitment will be discussed. Transient-state analysis such as symmetrical/unsymmetrical faults, transient stability will be discussed.

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 450 - Independent Study 1 to 4 credit hours.

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.

College of Business Courses

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. *Course cannot be used as a substitute for ACCT 211 or ACCT 212. Prerequisite: None

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 Mgmnt 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 College 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 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 319 - Business Ethics 3 credit hours. This course explores the application of philosophical ethics in making ethical business decisions; ethical concerns of capitalism; the societal role of business; and how managers develop and promote ethical actions.

BUSI 322 - Business Intelligence 3 credit hours.

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 their work. A minimum of 45 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 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.

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 205 - Intro to Database Management 3 credit hours. This course introduces the essentials database management with Microsoft Access. The topics covered include conceptual, logical and physical database design, entity relationship diagrams, creation and modification of tables in relational databases; basic and extended query formulation; and normalization techniques.

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.

DATA 450 - Independent Study 1 to 4 credit hours.

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. Sophomore standing.

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 are 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.

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 349 - 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. (Offered: Spring)

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 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 their work. A minimum of 135 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, 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, bankruptcy, commercial paper and sales. Prerequisite: LAW 241, junior standing.

LEAD 100 - Topics in Leadership 1 to 4 credit hours.

LEAD 101 - Transformational Leadership 1 credit hours. Introduces students to the transformational model of leadership. The course will present students with stories and experiences of current leaders to demonstrate the four tenets of transformational leadership. Students will discuss and reflect on the leadership examples, leading to the creation of and participation in a service leadership project.

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 306 - International Human Resources 3 credit hours.

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.

MGMT 485 - Equestrian Operations Managmnt 3 credit hours. This course provides an in-depth study of equestrian facility management and operational efficiency from the standpoint of site planning, stable layout and maintenance, out buildings, mechanical equipment, fencing, feeding, hay, bedding, storage, delivery, pastures, paddocks and shelters. Vendor relations with exposure to equipment hay and grain suppliers. It will also focus on identifying horse needs, safety, and emergency evacuation procedures. Students will learn proper environmental control, manure management, feeding and bedding storage and delivery, fencing andutilities. Some labs outside. Prerequisite: 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. MIS is core to quality analytics infrastructure and corporate strategy. Including theory and

knowledge for managing MIS including system elements, underlying structures, data management, project management, security, privacy, social responsibility, emerging tech, strategy, and governance. 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 333 - Equine Marketing 3 credit hours. This course involves discussions of the economic, structural, cultural, and political factors impacting marketing functions in equine business enterprises. Advertising and promotion, determining prices for breeding fees, boarding and training services, as well as the application of market research design and methodology in establishing equine-related businesses will be among the topics covered. Prerequisite: MKTG 221

MKTG 379 - 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 382 - Sales Marketing 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

MKTG 400 - Topics in Marketing 1 to 4 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 and one additional MKTG course. Must be a Junior or Senior standing.

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 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 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. This course provides an in-depth evaluation of the challenges of global marketing. Complexities related to international marketing will be addressed including developing cultural intelligence and identifying resources to understand governance structure, economic factors and legal requirements applied to various countries. Junior Standing. 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 are 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 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
Astrophysics	1912	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

Major	HEGIS Code	Degree Awarded
Electrical Engineering	0909	BS
Equine Business Management	0599	BS
Finance	0504	BS
Foreign Language and Culture Studies	1199	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
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

Major	HEGIS Code	Degree Awarded
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
Physics	1902	BS
Political Science	2207	BA
Psychology	2001	BA
Renewable Energy Engineering	0999	BS
Sociology	2208	BA
Spanish	1105	BA
Special Subjects: Visual Arts	1002	BFA
Sports and Health Sciences	1201	BS
Theatre	1007	BA

Faculty and Staff

Administration

Mark Zupan, PhD
President

Erin Martinovich, BA
Vice President for University Advancement

Mark Danes, MSPM, PMP
Vice President for Marketing and Communications

Jonathan Kent, MSEd
Vice President for Enrollment Management

Gabrielle Gaustad, PhD
Vice President for Statutory Affairs, Dean Inamori School of Engineering

Amy DeKay, MSEd
Vice President for Student Experience

Deb Steward, MSEd
Associate Vice President for Student Experience, Athletics and Recreation

Tammy Raub, CPA
Interim Vice President for Business & Finance/CFO

Jodi Howe, MBA
Deputy Chief Financial Officer

Deb Drain, SHRM-SCP
Chief Human Resources Officer

Beth Ann Dobie, PhD
Provost and Chief Operating Officer

Mary C. McAllister, AAS
Corporate Secretary, Alfred University

Staff

Admissions

Lindsey Burnham, MBA
Assistant Director, Graduate Admissions

Barbara Condrate, BS
Regional Director, Admissions

Sara Love, MA

Manager of Enrollment Operations

Mike Padlo, BBA
Senior Assistant Director, Admissions

Kathleen M. Torrey, MSEd
Associate Director, Admissions

Deanna Spencer, BS
Assistant Director of Enrollment Visits & Events

Kristen E. Vargason, MSEd
Director of Enrollment Strategic Planning & Transfer Admissions

Susan F. Weit, MPA
Associate Regional Director, Admissions

Business and Finance

Amanda Azzi, MBA
Controller

Melissa Badeau, MPA; MSED
Director, Procurement Services

Facilities

James Babcock
Executive Director, Facilities and Capital Projects

Tim Heckman
Assistant Director, Facilities and Capital Projects

Marketing and Communications

Mark Whitehouse, BA
Director of Communications

Jeffrey McDowell, BA
Digital Content Writer

Rob Price, MA
Writer

Maureen Caschera, MBA
Project Manager

Anthony Augustine, BS
Creative Services Manager

Michael Riina, BS
Graphic Designer, Videographer/Photographer

Justin Laguna, BS

Interactive Marketing Specialist

Contracted Services - Bookstore

Heather Miller, BAFA
Director, Alfred University Bookstore

Contracted Services - Dining Services

Erich Dobson, BA
Director, Dining Services

Engineering Administration

John Simmins, PhD
Director of Research Promotion/Economic Development & CACT

Amanda Jadwin, MS
Project Manager, CACT

David Gottfried, BS
Deputy Director for Business Development/Government Relations

Financial Aid

Jane Gilliland, MS
Executive Director of Student Financial Services

Kathy Harkenrider
Counselor, Student Financial Aid

Janine C. Mosher, BS
Associate Director, Student Financial Aid

Elena Wallace, BS
Counselor, Student Financial Aid

Information Technology Services

Gary Roberts, BA, MSLS
Director, Information Technology Services;
Associate Librarian

Ombuds Office

Frederic Beaudry, PhD
University Ombuds Officer

Registrar

Tammy Jursza Williams, MSEd
Registrar

Kathleen Hillman, MBA
Assistant Registrar

Alfred Ceramic Art Museum

D. Wayne Higby, PhD
Professor/Director of Alfred Ceramic Art Museum

Bill Giese, BFA
Operations Manager & Preparator

Susan Kowalczyk, MFA
Curator and Research Coordinator of Museums

Student Experience

Thomas Orrange, MLS
Dean of Student Experience

Eliza Ordway, MSEd
Director of Student Activities

Scott Richardson
Chief, Public Safety

Angie Taylor, PhD
Chief Diversity Officer and Title IX Coordinator

Athletics

Chris Boswell, BS
Director of Athletic Communications

Devon Withers, MBA
Sports Information Specialist

Curtis Bailey, BA
Assistant Football Coach, Offensive Coordinator

Nicole Bernsen, PhD

Director of Rugby/Head Women's Rugby Coach

Tracy Blake, BA
Head Men’s Soccer Coach; Instructor in Physical Education

Brady Bonacquisti, MSEd, CAS
Assistant Football Coach; Instructor in Physical Education

Jordan Crouch, BS
Men's & Women's Tennis

Julia Decker, MSEd
Head Women's Lacrosse Coach

Ronald Demchak, MS
Head Athletic Trainer

Adam DuPree, AAS
Manager Athletic Equipment/Facilities

Letti Hibbard, MS
Assistant Athletic Trainer

Mike Honeycutt, MSEd
Head Women's Volleyball Coach

Erich Kaempffe, BA
Head Men’s Basketball Coach

Jason H. Lockner, MS
Head Men’s Lacrosse Coach; Instructor in Physical Education

Hunter Miles, MBA
Assistant Football Coach/Head JV Coach

Mike Moskowitz, MA
Head Women’s Basketball Coach; Instructor in Physical Education

Matthew Phillips, MS
Head M/W Cross Country and Track & Field Coach

Bob Rankl, MS
Head Football Coach

Erin Schurr, MS
Associate Director of Athletics

Theresa Shattan, MS
Head Hunt Seat/Dressage Coach/Instructor/Trainer

Deb Stewart, MSED
Associate Visce President for Student Experience, Athletics & Recreation

Brian Striker, BS
Head Men’s and Women’s Swimming Coach; Instructor in Physical Education

Luke Wesneski, MS
Head Women’s Softball Coach; Instructor in Physical Education

Sierra Wilson, MS
Assistant head M/W Corss Country and Track & Field Coach

Craig Yanni, MS
Head Women’s Soccer Coach; Instructor in Physical Education

Career Development Center

Jessica Doner, MSEd, CDCS, CVCS, CPRW
Director, Career Development Center

Madelynn Cullings, MA
Assistant Director

Center for Academic Success

Chris Gause, MA
Director, Center for Academic Success

Jacqueline Eason
Assistant Director

Vicky Westacott, PhD
Director of the Writing Center

Center for Advising

Chelsea Ames, MBA
Director, Center for Advising

Opportunity Programs

Michele M. Doorley, BA
Interim Director, Opportunity Programs

Wendy I. Marvin, BA
Interim Assistant Director, Opportunity Programs

Judson Leadership Center

Abigail C. Hurley, MSEd
Coordinator, Director of Women’s Leadership Academy

Education Abroad

Laura Johnson, MS
Director of Education Abroad

Equestrian Programs

Steve Shank, MBA
Director of Equestrian Center

Residence Life

Max Koskoff, MBA, MS
Director, Residential Communities

Brenden Navarro, MS
Associate Director of Residence Life for Residential Education

Kevin Trudell, M.Ed
Associate Director of Residential Communities Assignments & Operations
Megan Kneal
Administrative Assistant
Madigan Howard, MSEd
Area Coordinator
Liz Peralta, MSW
Area Coordinator
Jamie Seifert, MSM
Area Coordinator
Angel Victorino
Area Coordinator

Wellness Center

Susan Hendee, NP, MS
Co-Director Wellness Center

Kara Taylor, LMHC
Co-Director Wellness Center

University Advancement

Anne Cornell, BA
Director, Donor Relations

Jennifer Gibson, MA
Director of Family Engagement & Philanthropy

Jamall Lewis, BS
Assistant Director of Major Gifts

Robin Mazejka, BA
Senior Director, Principal & Capital Gifts

Janet Marble, AS

Alumni Engagement Officer

Jenny McCumiskey, MBA
Director of Advancement Services

Audrea Sirianni
Annual Giving Officer

Melissa Van Winkle, MBA
Director of Alumni & Constituent Development
Michael Wesley, MBA
Associate Director of Constituent Research & Prospect Management

Faculties

College of Liberal Arts and Sciences

Robert Stein (2004)
BA, Stanford University;
MA, PhD, University of Michigan
Dean, College of Liberal Arts and Sciences

Corey Fecteau (2008)
BA, BS, MSEd, Alfred University
Assistant Dean, College of Liberal Arts and Sciences

Division of Biology and Biochemistry

Jean A. Cardinale (2000)
BS, MS, PhD, University of Rochester
Professor of Biology; Chair, Division of Biology

Cheryld L. Emmons (1999)
BS, Siena College; MS, Bowling Green State Univ.;
PhD, University of Florida
Professor of Biology

Jennifer Gordon (2021)
BS, SUNY Oneonta;
MS, Georgia Southern University;
PhD, Springfield College
Assistant Professor of Anatomy and Physiology

Geoffrey M. Lippa (2015)
BS, Hobart and William Smith Colleges;
PhD, University of Rochester
Assistant Professor of Biology & Biochemistry

Chloe Wasendorf (2022)
BS, PhD, Iowa State University
Assistant Professor of Biology

Division of Chemistry

John D’Angelo (2007)
BS, SUNY Stony Brook;
PhD, University of Connecticut at Storrs
Professor of Chemistry; Chair, Division of Chemistry

Andrew G. Eklund (2001)
BA, College of Wooster;
PhD, University of California at Irvine
Professor of Chemistry

David A. Marsh (2017)
BS, University at Buffalo;
PhD, University of California at Irvine
Assistant Professor of Chemistry

Garrett McGowan (1997)
BS, University of Maine; PhD, University of Vermont
Professor of Chemistry

Division of Education

Timothy Nichols (2018)
BA, Houghton College; MS, SUNY Buffalo;
PhD, University at Buffalo
Associate Professor of Education; Chair, Division of Education

Kelly Williams (2002)
BA, SUNY Potsdam; M.S., SUNY Potsdam;
MEd, St. Lawrence University
Clinical Assistant Professor of Education

Division of English

Melissa Ryan (2004)
BA, Middlebury College;
MA, PhD, University of Arizona
Professor of English; Chair, Division of English

Allen W. Grove (1997)
BS, Massachusetts Institute of Technology;
MA, PhD, University of Pennsylvania
Professor of English; Director, First Year Experience Program

Sarah Cote (2013)
BA, MA Boston College; PhD Cornell University
Clinical Assistant Professor, English

Timothy Cox (2008)
BA, Mansfield University of Pennsylvania;
MA, PhD, The Pennsylvania State University

Clinical Associate Professor, English
Fred H. Gertz Endowed Chair

Juliana Gray (2006)
BA, University of Alabama;
MA, University of Tennessee;
PhD, University of Cincinnati
Professor of English; Director, Honors Program

Susan Neal Mayberry (1982)
BA, Meredith College;
MA, North Carolina State University;
PhD, University of Tennessee
Jane Petersen Professor of Humanities

Susan P. Morehouse (1990)
BA, Hampshire College; MFA, University of Virginia
Professor of English

Lynn Petrillo (2007)
BA, Lafayette College; M.A., University of California, Davis
PhD, Binghamton University
Clinical Assistant Professor of English

Robert J. Reginio (2008)
BA, MA, PhD, University of Massachusetts at Amherst
Professor of English

Heather Yanda (1997)
BA, Alfred University; MFA, Western Michigan University
Senior Lecturer, English

Division of Environmental Studies and Geology

Frederic Beaudry (2010)
BS, Université du Québec; MS, Cal Poly Humboldt State University;
PhD, University of Maine
Professor of Environmental Studies;
Chair, Division of Environmental Studies and Geology

Division of Health and Human Performance

Jason Honeck (2021)
BS, MSEd Alfred University
Associate Professor of Athletic Training;
Director, Athletic Training

Liam Glover (2019)
BS, MBA, Alfred University
Clinical Coordinator, HHP

Eden Palmer (2020)
BS, Alfred University;

MS, Indiana Wesleyan University
Visiting Instructor of Health and Human Performance

Division of Human Studies

Emrys Westacott (1996)
BA, University of Sheffield; MA, McGill University;
PhD, University of Texas
Professor of Philosophy; Chair, Division of Human Studies

Paul Butterfield (2022)
MA, MSc, University of Glasgow
PhD, The Graduate Center, City University of New York
Assistant Professor of Philosophy

Andrew Kless, (2017)
BA, MA, Syracuse University;
MA, University of Rochester;
Assistant Professor of History and Global Studies

Mallory Szymanski (2018)
BA, MA, PhD, University of Florida
Assistant Professor of History

Division of Mathematics and Computer Science

Likin C. Simon Romero (2014)
BS, Universidad Nacional Autónoma de México;
PhD. West Virginia University
Associate Professor of Mathematics; Chair, Division of Math and Computer Science

Alan Beadle (2022)
BS, MS Clarkson University;
MS, University of Rochester;
PhD, University of Rochester (ABD)
Instructor, Computer Science

Harpreet Bedi (2018)
MA, University of Denver;
MS, London School of Economics and Political Science;
PhD, George Washington University
Assistant Professor of Mathematics

Timothy Ferdinands (2019)
BA, Calvin College
MS, PhD University of Notre Dame
Assistant Professor of Mathematics

Garegin Grigoryan (2020)
MS, Clarkson University;
PhD, Rochester Institute of Technology
Assistant Professor of Math and Computer Science

Amanda Lipnicki (2014)
BA, University of Maine at Farmington;
MA, Binghamton University
Associate Professor of Mathematics

Elizabeth B. Matson (2018)
BA, Houghton College; MA, PhD, Auburn University
Assistant Professor of Mathematics

Joseph A. Petrillo (2005)
BS, Wilkes University;
MA, PhD, Binghamton University, SUNY
Professor of Mathematics

Division of Modern Languages

Sandra l. Singer (1994)
BA, Michigan State University;
MA, PhD, University of Wisconsin-Madison
Professor of German
Chair, Division of Modern Languages

Elise Bouhet (2022)
BA, MA (equivalents) Universite Stendhal;
MA, PhD, SUNY Albany
Assistant Professor of Modern Languages

Kerry Ann Kautzman (2000)
BA, Gannon University;
MA, PhD, University of Cincinnati
Professor of Spanish;
Director of Transfer Experience

Division of Physics and Astronomy

Joseph D. Kirtland (2012)
BS, Cooper Union; M.S., Ph.D., Cornell University
Associate Professor of Physics;
Chair, Division of Physics and Astronomy

Roger J. Loucks (2002)
BS, Houghton College;
MS, Rensselaer Polytechnic Institute;
PhD, University of Illinois at Urbana-Champaign
Professor of Physics

David R. Degraff (1992)
BS, St. Lawrence University;
MS, Ph.D., University of North Carolina
Professor of Astronomy

Division of Psychology and Communication Studies

Danielle D. Gagne (2004)
BA, Keene State College;
MA, PhD, University of New Hampshire
Professor of Psychology;
Chair, Division of Psychology and Communication Studies

Amy Button-Ervin (2014)
BA, St. Bonaventure University
Ma, PsyD, Alfred University
Associate Professor of Psychology

Bethany Johnson (2011)
BA, Hendrix College; MA, PhD, University of Nebraska
Associate Professor of Psychology

Julia Langdal-Sittu (2022)
BA, Northern Arizona University;
MA, Fuller Graduate School; MA, Fuller Theological Seminary;
PsyD, Fuller Graduate School of Psychology
Assistant Professor of Psychology

Louis J. Lichtman (1970)
BS, Brooklyn; PhD, University of Maine
Professor of Psychology

Robert J. Maiden (1982)
B., University of Michigan:
MA, PhD, New School for Social Research
Professor of Psychology; Director, Gerontology

Communication Studies Program

Pamela D. Schultz (1992)
BA, Oakland University;
MA, Bowling Green State University;
PhD, Wayne State University
Professor of Communication Studies;
Director, Communication Studies

Nicholas G. Schlegel (2016)
BA Eastern Michigan University;
MA, PhD, Wayne State University
Associate Professor of Communication Studies

Division of Social Sciences

Michele Lowry (2015)
BA, Alfred University; MA, Columbia University;
MA, CAS, PsyD, Alfred University

Associate Professor of Criminal Justice
Director of Criminal Justice Studies Program
Chair, Division of Social Sciences

Meredith Field (2020)
PhD, Pennsylvania State University (Rural Sociology)
PhD, Pennsylvania State University (Women's Studies)
MSEd, Bucknell University
Assistant Professor of Sociology

Sari Krieger Rivera (2023)
BA, Binghamton University
MA, New York University
PhD, City University of New York Graduate Center
Assistant Professor of Political Science

Jeffrey Sluyter-Beltrão (2005)
BA, College of William and Mary;
MIA, Columbia University;
PhD, University of California/Berkeley
Associate Professor of Political Science;

Desmond Wallace (2019)
BA, Coastal Carolina University
PhD, University of Iowa
Assistant Professor, Political Science

New York State College of Ceramics

School of Art & Design

Lauren Lake (2020)
BA, University of Florida
MFA, University of Wisconsin-Madison
Michele and Martin Cohen Dean, School of Art & Design + Performing Arts Division

Maria Bentley (2015)
MSEd, BFA, Alfred University;
Assistant Dean, School of Art & Design + Performing Arts

Sharon McConnell (2013)
BFA, Utah State University;
MS, Alfred University;
MFA, School of the Arts Institute of Chicago
Director of School of Art & Design Galleries

Rebecca Arday (2021)
MFA, The Ohio State University
BFA, Rochester Institute of Technology
Visiting Assistant Professor of Glass

Meg Bernstein (2023)
PhD, UCLA

MS, Yale Divinity School
MA, University of Massachusetts
Assistant Professor of Art History

Xiaowen Chen (1999)
BFA, Lu Xun Academy of Fine Arts, Shenyang, China;
MA, MFA, Illinois State University
Professor of Printmaking

Hope M. Childers (2011)
BFA, MA, Louisiana State University;
PhD, University of California
Associate Professor of Art History;
Chair, Division of Art History

William S. Contino (2008)
BFA, Alfred University;
MFA, Maryland Institute College of Art
Associate Professor of Print Media;
Chair, Division of Expanded Media

Andrew Deutsch (1996)
BFA, Alfred University;
MFA, Renesselaer Polytechnic Institute
Professor of Sound Design & Video Arts

Gerar Edizel (1990)
MA, PhD, Cornell University
Professor of Art History

Jason Green (2009)
BFA, UConn School of Fine Arts;
MFA, Alfred University
Clinical Assistant Professor, Ceramic Art

Stephanie Hanes (2022)
MS, Rhode Island School of Design
BFA, NSCAD
Assistant Professor of Ceramic Sculpture

James Hansen (2019)
BA, Webster University;
MA, Columbia University;
MA, PhD, The Ohio State University
Assistant Professor, Art History

D. Wayne Higby (1973)
B.F.A., University of Colorado; M.F.A., University of Michigan;
Kruson Distinguished Professor of Ceramics
Director/Chief Curator Alfred Ceramic Art Museum

Johnathan Hopp (2018)
BFA, Rhode Island School of Design;
MDes, Bezalel Academy of Arts and Design
Assistant Professor of Ceramic Art

K. Dale Inglett (2007)

BFA, Augusta State University;
MFA, University ofGeorgia
Associate Professor of Art

Mary Johnson (2022)
BAFA, Gordon College
MFA, SUNY Buffalo
Director of Foundations

Meghen Jones (2014)
BA, Earlham College; M.A., Musashino, Tokyo, Japan;
MA, PhD, Boston University
Associate Professor of Art History

Coral Lambert (2007)
BFA, Canterbury School of Art, England;
MFA, Manchester Metropolitan University, England
Professor of Sculpture

Walter McConnell (1997)
BFA, University of Connecticut;
MFA, Alfred University
Professor of Ceramic Art
Chair, Division of Ceramic Art

Mary Drach McInnes (1997)
BA, University of California;
MA, PhD, Boston University
Professor of Art History

Stephanie E. McMahon (2008)
BFA, Alfred University;
MFA, University of Texas at Austin
Professor of Painting

Anthony Nguyen (2022)
BA, New York University;
MFA, Cranbrook Academy of Art
Assistant Professor of Design

Angus Powers (2006)
BFA, Alfred University;
MFA, Temple University
Professor of Glass

Joseph Scheer (1989)
BFA, Alfred University;
MA., MFA, University of New Mexico
Professor of Printmaking

Linda Sikora (1997)
FA, David Thompson University Center;
BFA, Nova Scotia College of Art and Design;
MFA, University of Minnesota
Robert C. Turner Professor of Ceramic Art

Kathryn Vajda (2016)
BFA, Cleveland Institute of Art;
MFA, Indiana University
Clinical Assistant Professor of Expanded Media

William Wheeler (2021)
BA, Vassar College;
MA, Yale University
Assistant Professor of Sculpture

Division of Performing Arts

D. Chase Angier (2002)
BA, University of California-Los Angeles;
MFA, The Ohio State University
Professor of Dance

Zachary Hamm (2019)
BA, Connecticut College;
MFA, University of North Carolina, Chapel Hill
Clinical Associate Professor of Theatre Design/Technical Director

Heidi Jensen (2022)
Visiting Assistant Professor of Music

Lisa E. Lantz (1997)
BM, University of Toledo;
MM, University of Michigan;
DMA, Ohio State University
Professor of Music/Strings

Debra MacCrea (2019)
Clinical Instructor of Performing Arts, Costume Shop Manager

Randy (John) Wachtel (2022)
BFA, Arkansas State University;
MS, Texas A&M University-Commerce
Clinical Professor of Practice & Production Management

Colleen T. Wahl (2016)
BA, William Smith College;
MA, Empire State College;
MFA, SUNY Brockport
Assistant Professor of Dance

Maureen Weiss (2019)
BFA, University of Southern California;
MFA, California State University
Associate Professor of Performance Design

Zhongbei (Daisy) Wu (2016)
BA, Music School of Hunan Normal University;
MA, The Graduate School of China
Director, Chinese Language & Culture Programs

Jonathan Ziese (2022)
Assistant Professor of Theatre

Kazuo Inamori School of Engineering

Gabrielle Gaustad (2019)
BS, NYS College of Ceramics at Alfred University;
MS, PhD, Massachusetts Institute of Technology
Dean, Inamori School of Engineering, VP for Statutory Affairs

Emilie L. Carney (2003)
BS, MBA, Alfred University
Assistant Dean, Inamori School of Engineering

Ceramic Engineering and Materials Science (Statutory)

Alexis G. Clare (1989)
BSc., PhD, University of Reading (England)
Professor of Glass Science

Junjun Ding (2017)
BS, University of Science and Technology of China;
PhD, Stevens Institute of Technology
Assistant Professor of Materials Science and Engineering

Timothy Keenan (2019)
BS, MS, PhD., Alfred University
Assistant Professor of Biomaterials Engineering

Scott T. Misture (1996)
BS, PhD, Alfred University
Inamori Professor of Materials Science and Engineering
Program Chair, Materials Science and Biomaterials Engineering

Doris Möencke (2018)
Diplom, PhD, Friedrich-Schiller-University, Jena, Germany
Associate Professor of Glass Science and Engineering

Steven M. Pilgrim (1993)
BS, PhD, Pennsylvania State University
Professor of Materials Science and Engineering

Holly Shulman (2017)
BS, Alfred University;
MS, University of Pittsburgh;
PhD, Swiss Federal Institute of Technology
Professor of Ceramic Engineering

S.K. Sundaram (2011)
M. Tech., Indian Institute of Technology, Kharagpur (India);
PhD, Georgia Institute of Technology
Inamori Professor of Materials Science and Engineering

Steven Tidrow (2015)
BS, MS, Texas Tech University;
PhD, University of Oklahoma
Inamori Professor of Materials Science and Engineering

Kun Wang (2018)
BE, Central South University, China;
MM, Chinese Academy of Sciences, China;
PhD, Swiss Federal Institute of Technology Lausanne, Switzerland
Assistant Professor of Material Sciences and Engineering

Collin Wilkinson (2023)
PhD, Pennsylvania State University
BA, Coe College
Assistant Professor of Glass Science & Engineering

Anthony W. Wren (2011)
BSc, National University of Ireland, Maynooth (Ireland);
MSc., PhD, University of Limerick (Ireland)
Assistant Professor of Biomaterials

Yiquan Wu (2011)
BS, Wuhan University of Science and Technology;
MS, Chinese Academy of Sciences and University of Science and Technology of China;
PhD, Imperial College London
Inamori Professor of Ceramic Engineering and Materials Science

Electrical and Renewable Energy Engineering (Non-Statutory)

Jalal Baghdadchi (1999)
BS, University of Massachusetts;
Professor of Electrical Engineering, Renewable Energy Engineering

Dan Lu (2017)
BS, North China Electric Power University;
MS, PhD, Illinois Institute of Technology
Assistant Professor of Renewable Energy Engineering

Xingwu Wang (1988)
BS, Harbin Naval Engineering Institute;
MS, Hangzhou University;
PhD, SUNY at Buffalo
Professor of Electrical Engineering, Renewable Energy Engineering

Junpeng Zhan (2020)
BE, PhD, Zhejiang University (China)
Assistant Professor of Renewable Energy Engineering

Mechanical Engineering (Non-Statutory)

Ehsan Ghotbi (2013)
BS, Amirkabir University;

MS, Institute for Management and Planning Studies;
MS, PhD, University of Wisconsin
Associate Professor of Mechanical Engineering

Seong-Jin Lee (2015)
BS, Korea Aerospace University;
MS, Oregon State University;
ME, Cornell University
PhD, Oklahoma State University
Associate Professor, Mechanical Engineering

Amit Maha (2018)
BS, MS, PhD, Louisiana State University
Assistant Professor, Mechanical Engineering

College of Business

Mark Lewis (2011)
BS, SUNY Institute of Technology;
MBA, Pacific Lutheran University;
Dean, College of Business;
Tredennick Endowed Chair in Entrepreneurial Studies

Victoria Cramp (2022)
BS, MBA, Alfred University
Assistant Dean, College of Business

Theresa A. Gunn (2008)
BS, MBA, Alfred University;
PHD, TUI University
Associate Professor of Accountancy, Associate Dean
Raymond Endowed Chair

Jean Ellefson (2019)
BS, Washington University;
MS Rochester Institute of Technology;
MS, Massachusetts of Technology
Assistant Professor of Analytics

H. Fred Farley (2016)
BS, MS, Frances Payne Bolton School of Nursing, Case Western Reserve University
BA, Thiel College;
PhD, Decker School of Nursing, Binghamton University
Associate Professor of Management
J. Henry Smith Endowed Professorship

Shelly Freyn (2019)
BS, Cornell University;
MBA, St. Bonaventure University;
DBA, Cleveland State University;
DBA, Anderson University
Assistant Professor of Marketing

Yavuz Keceli (2019)

BS, Middle East Technical University, Turkey;
MBA, Pukyong National University, Korea;
PhD, Dong-A University, Korea
Assistant Professor of Information Systems

Sangjoon Lee (2005)
BA, Yonsei University, Korea;
MBA, George Washington University;
PhD, SUNY at Buffalo
Professor of Economics

Diana Maguire (2015)
BS, MBA, St. Bonaventure University;
EdD, Creighton University
Associate Professor of Management

Jason Morrison (2020)
PhD, MS, MBA, The University of Texas at Arlington
Assistant Professor of Finance
Tredennick Endowed Chair in Entrepreneurial Studies

Grzegorz Pac (2009)
BS, Saint Peter's College;
Ph.D., University of Colorado
Associate Professor of Economics
Neville Chair in Economics

Luis Rodriguez (2014)
BS, Long Island University;
MBA, Baruch College, CUNY;
JD, LLM, New York Law School
Associate Professor of Law and Taxation

William Shibuya (2022)
BS, University of Sao Paulo
Executive MBA, BBS Brazil; MS, FECAP, Brazil
PhD, University of Houston
Assistant Professor of Marketing

Marwa Soliman (2022)
BComm, Mansoura University;
MSc, University of Memphis;
PhD, University of Ottawa
Assistant Professor of Accountancy

Halil Zaim (2022)
BS, MS, PhD, Istanbul University;
Visiting Assistant Professor of Management

School of Graduate and Continuing Studies

Al Mancuso (2022)
BA, St. John's University;
MA, PsyD, Alfred University

Dean, School of Graduate and Continuing Studies

Justin Grigg (2005)
BA, Trinity College;
MLA, Harvard University
Associate Dean, School of Graduate and Continuing Studies

Division of Education (in partnership with College of Liberal Arts and Sciences)

Danielle Cowley (2022)
PhD, Syracuse University
MS, Ithaca College
BS, Morningside University
Associate Professor of Education

Division of Counseling and School Psychology

J. Stephen Byrne (2011)
BA, Boston College;
MA, PsyD, Marywood University
Associate Professor of Counseling

Kevin Curtin (2010)
BS., St. John Fisher College;
MS, Radford University;
PhD, George Washington University
Professor of Counseling, Chair

Bradford Daly (2018)
BA, University of Rochester;
PhD, University of Buffalo
Assistant Professor School Psychology

Melissa Dudley (2020)
BA, SUNY Geneseo;
MSW, PhD, SUNY Buffalo;
Assistant Professor of School Psychology

Angeline Felber (2019)
MSEd, Penn State University;
MS, Marquette University
Assistant Professor of Counseling

Geremy Grant (2022)
BA, Adelphi Univeristy
PhD, MSEd Columbia University
Assistant Professor of School Psychology

Lynn O’Connell (2005)
BA, SUNY at Plattsburgh;
MA, PsyD, Alfred University

Professor of School Psychology

Alfred University Libraries

Brian T. Sullivan, MSLS
Dean of Libraries

Mechele Romanchock, MSLS
Director of Libraries

Kevin A. Adams, MS
Information Literacy Librarian

Megan Allen, MS
Digital Projects Coordinator

Brett Arno, BA
Library System Support Specialist

Ellen J. Bahr, MLIS
Systems Librarian

Amanda Criss, BS
Interlibrary Loan Coordinator
Nicolas Crosby, MS
Technical Services Assistant of Acquisitions & Serials

Samantha Dannick, MS
Engineering & Scholarly Communication Librarian

Laura Habecker, MA
Archives Coordinator

John Hosford, MLS
Art Librarian

Laurie L. Lounsberry Meehan, MLS
Librarian and University Archivist

Haleigh Mikolajczyk, MLS
Public Services Coordinator

Maria Planansky, MLIS
Collection Management Librarian

David Snyder, AAS
Public Services Coordinator

Linda Sootheran
Technical Processes Manager

Rebecca Stewart
Technical Services Assistant of Cataloging

Emeriti

Daniel D. Acton

BA, Muskingum College;
MBA, Miami (of Ohio);
DBA, Kent State University;
CPA, New York
J. Henry Smith Research Fellow; Professor of Accountancy, Emeritus

Vasantha R.W. Amarakoon
BSc, University of Ceylon (Sri-Lanka);
Bsc, University of Leeds (England);
PhD, University of Illinois
Professor of Ceramic and Electrical Engineering, Emeritus

Martha G. Anderson
BA, St. Olaf College;
MA, New York University, Institute of Fine Arts;
PhD, Indiana University
Professor of Art History, Emerita

Pamela A. Armstrong
BA, Chatham College;
MSEd, Alfred University;
MLS, SUNY at Geneseo
Research Services Librarian, Emerita

George W. Ball
BS, Union College;
MS, Rochester Institute of Technology;
MS, PhD, Syracuse University
Professor of Computer Science, Emeritus

Cecilia Beach
BA, Pomona College;
MA, Middlebury College;
DEA, Universite de Paris VII;
PhD, New York University
Professor of French, Emerita

Wesley E. Bentz
BA, Whitman College;
PhD, University of Rochester
Kruson Distinguished Professor of Chemistry, Emeritus

Peer D. Bode
BA, SUNY at Binghamton;
MAH, SUNY at Buffalo
Professor of Video Art, Emeritus

Bradley S. Bowden
BS, Massachusetts;
PhD, University of Connecticut
Professor of Biology, Emeritus

Laurel Buckwalter
BA, Houghton College
University Carilloneur, Emerita

Vernon L. Burdick
BS, MS, Alfred University;
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