



Alfred University
OUTSIDE of ORDINARY

2025-2026
UNDERGRADUATE CATALOG

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General Information

Catalog Disclaimer

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

Our Mission

Alfred University's mission is **helping students realize their purpose**. People living a life of purpose enjoy longer and happier lives. Alfred University promotes its mission through three core strengths:

Intersections

Nestled in the scenic Allegheny Mountains, Alfred University offers a broad array of curricular and co-curricular options from which students can build impactful educational pathways. There are also intersections with applied, experiential learning opportunities; leadership, communication, and critical thinking development; and engaging with community members who bring different perspectives and backgrounds to our campus. All these intersections contribute to meaningful, professional, and personal outcomes.

Mentorship

We promote connections for students with each other, faculty, staff, and alumni. These connections form the basis of lifelong friendships and mentorship, which positively impact the life trajectories of our graduates.

Thanks to the success of our faculty and staff in securing research grants, our students benefit from faculty-mentored, hands-on research opportunities that investigate cutting-edge problems using state-of-the-art technologies.

Inclusivity

We are deeply committed to the self-realization and success of every student at Alfred University. We foster a sense of belonging among all members of our campus community – faculty, staff, and students – in which our ability to express ourselves thoughtfully, and to listen and learn from others advances the capacity to thrive in the workplace and our communities. These power skills embody our values and are essential to preparing our students for their future careers and lives.

Alfred University prides itself on being inclusive since our founding in 1836. We were the first higher education institution in the country to be fully open to women and one of the first to admit Native American and African American students. We were the first school to invite a woman to deliver the commencement speech. Renowned orator and abolitionist Frederick Douglass visited Alfred University

several times in the 1850s and remarked about the friendliness and kindness of our campus community, as well as the beauty of our rural setting.

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

Policies & Procedures 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, college or preparatory curriculum
- Grades
- Extracurricular involvement
- Letters of recommendation
- Essay
- Interview/demonstrated interest

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 & 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.

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)
Portfolio for BFA Applicants Only (see below)

The remainder of the 16 academic units should be earned within the fields listed or in a foreign language.

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.

First Year 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
- Essay
- At least one letter of recommendation (guidance counselor, teacher, principal, headmaster, etc.)
- Optional submission of results from ACT or SAT tests
- School of Art & Design and Performing Arts Division BFA applicants please refer to the Portfolio Requirements section
- Additional materials or an interview may be required

First- Year Application Deadlines

December 1 - Early Action for fall enrollment

February 1 - Priority deadline for regular fall enrollment

December 1 - Regular spring enrollment

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.

Transfer Applicants

Academic Preparation

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

- Completed/attempted credit hours at an accredited college or university as a matriculated students after completing a high school degree or equivalent
- 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 a GPA 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 may be 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 items when applying for admission:

- Application for Transfer Admission via the [Common Application](#) or [Alfred University Application](#)

- Official transcripts from each college/university where college credit has been earned which includes all academic work to date
- A final official high school transcript or equivalent
- Essay
- 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
- School of Art & Design and Performing Arts Division BFA applicants please refer to the Portfolio Requirements section

Transfer Application Deadlines

July 1- Regular fall enrollment

Dec. 1- Regular spring enrollment

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.

International Student Policies and Procedures

All applicants who are not US citizens or US permanent residents at the time of application are considered international applicants. If you become a US citizen or permanent resident after you've applied to Alfred University, you may submit documentation of this change (a copy of your Certificate of Citizenship, Certificate of Naturalization, or Permanent Resident Card) to the Office of Admissions to update your citizenship status. US citizens and permanent residents, no matter where in the world they live or go to school, are not considered international applicants but will be reviewed for admission within the context of their school cohort.

International students should submit the following items when applying for admission:

- Application for Admission via the [Common Application](#) or [Alfred University Application](#)
- Official or certified secondary and post- secondary transcripts or records of grades to- date and showing

proof of graduation. These must be prepared and authorized by the student's home institution and be accompanied by a certified English translation. International student records may be evaluated by either the World Evaluation Services organization (WES) or Education Evaluators International (EEI).

- Essay
- At least one letter of recommendation from a school counselor or academic instructor.
- Optional submission of results from ACT or SAT tests or official English proficiency scores. We accept the following examinations:
 - TOEFL- 80
 - IELTS- 6.5-7 overall
 - Duolingo- 100
 - OAK- Grade Pre- 1
 - CERF OF B2
 - On a case-by-case basis we also consider completion of an ELS program at authorized partner ELS schools. Consult our counselors for details
- Certified Bank Statement
- Financial Certification Form
- Copy of Passport
- School of Art & Design and Performing Arts Division BFA applicants please refer to the Portfolio Requirements section
- Additional materials or an interview may be required

International students planning to take AP or CLEP exams should plan on completing exams prior to enrolling.

International Application Deadlines

Fall Semester

March 15- First Year Students

May 1- Transfer students currently in the US

Spring Semester

October 15- First- Year Students

November 15- Transfer Students currently in the US

On a case- by- case basis, these deadlines may be extended depending on guidance from the State Department. All other enrollment tasks and deadlines must be met.

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.

School of Art & Design Portfolio Requirements

Bachelor of Fine Arts (BFA) and Bachelor of Science in Art History and Theory (BS), School of Art & Design applicants are required to submit an art portfolio as part of the admissions requirements. Applicants should submit the required portfolio electronically through the [SlideRoom portal](#). The portfolio should include 15 to 20 samples of your best work, four works must be drawings from direct observation. These may include sketches or quick observational studies. Each slide should showcase ONE image, please do not include multiple shots on the same side. All media submitted must include: medium, dimensions, date created, and title.

Images of work should be of high quality and formatted for SlideRoom viewing. All work should demonstrate your command of elements of visual language, including composition, line, form, and color. Your portfolio should also demonstrate your conceptual skills, your willingness to experiment, and your respect for craftsmanship, as well as your commitment to visual expression and communication. Your portfolio may include "work in progress." Sketches can provide valuable information about how you see, how you work, and how you think. Please refer to the [Undergraduate School of Art & Design Portfolio](#) webpage for additional details.

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](#).

Performing Arts Division Portfolio Requirements

Bachelor of Fine Arts (BFA) in Interdisciplinary Performing Arts with focus areas in Dance, Music-Performance, Music-Sound Studies, Performance Design & Technology, and Theatre Applicants are required to submit a portfolio as part of the admissions requirements. No portfolio is required for the Bachelor of Arts (BA) degrees. Applicants should submit the required portfolio electronically through the [SlideRoom portal](#). Please refer to the [Undergraduate Performing Arts Portfolio](#) webpage for detailed requirements by discipline.

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](#).

Decisions & Notification

Early Action

The Early Action admission option offers first year 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 January 15. Notification for Early Action applicants begins in November and continues on a rolling basis until January 15 for all on-time applications. Early Action applicants who are not accepted may be deferred to Regular Decision. Accepted Early Action candidates have until May 1 to make their decision on attending Alfred University.

Regular Decision

Notification for Regular Decision applicants begins in late November and continues on a rolling basis. Accepted Regular Decision candidates have until May 1 to make their decision on attending Alfred University. Notification for Regular Decision spring applicants begins in October and continues on a rolling basis.

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.

AU Advantage Summer Bridge Program

The AU Advantage Summer Bridge Program (AUA) assists first- year students in transitioning from high school to college- personally, academically and socially- by getting a jumpstart on their academics and college experience.

Students accepted into the AUA Program 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 community. Students earn credits towards graduation by taking a “Dynamics of Student Success” course along with one other course predetermined by major.

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.

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.

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 & what you've been doing during your time away
- If you have completed courses at other institutions since attending AU, submit your official transcript(s)
- BFA students must submit an updated portfolio. Be sure to view the Portfolio requirements section
- A letter of recommendation may be required. This letter can be from an employer if you have been employed since leaving the University or from a faculty member. This can either be an AU faculty member or a faculty at another institution you attended.

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.

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.

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.



Tuition, Expenses, Financial Aid

Tuition, Housing and Meals 2025-2026

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 2025-2026 academic year.

Programs	Cost
Liberal Arts & Sciences and Business	\$42,190
Mechanical, Renewable Energy, and Undecided Engineering	\$42,190
Art and Design, Biomaterials Engineering, Ceramic Engineering, Glass Engineering Science, and Materials Science and Engineering: New York State Residents	\$24,600
Art and Design, Biomaterials Engineering, Ceramic Engineering, Glass Engineering Science, and Materials Science and Engineering: Non-NY State Residents	\$42,190
Student Service Fee	\$1,380 per year
Average Housing** and Meal Plan (on campus)	\$16,130

* 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 2025-2026 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 2025-2026 are charged at a rate of \$1,290 per credit hour and there is a part-time student service fee of \$130.

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 2025 through August 2026 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

\$11,980 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 \$3,000 in travel and personal expenses. Commuter students should estimate about \$5,000 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 ($124 \times 1.5 = 186$).

◦ **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 ($60 \times .67 = 40.2$).

◦ **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 prior to the 3rd week of classes 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	2.0	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 and Resources

Campus Center

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 Advising, 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.

Division of Student Experience

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.

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.

For most up to date information about clubs and organizations visit auconnect.alfred.edu.

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 and Films

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 Powell Campus Center as well as large concerts by well-known performers. Alfred Art walk occurs on the third Thursday every month with arts venues open all over the Village of Alfred.

Student theater and dance productions, as well as performances by musical ensembles, occur at frequent intervals throughout the year.

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.

Athletics

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

Indoor Facilities

McLane Center is the hub of athletic and recreational activities housing our six-lane pool and adjacent diving well (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 from the summer of 2024 through early 2026. 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 which 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. 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).

Cheerleading competes for the National Cheerleaders Association; women's rugby competes for the Upstate New York Collegiate Rugby Conference; and men's rugby competes under Lake Effect Rugby Conference.

Club Sports

Club Sports change year to year and are based on student interests. The University also offers club sports such as Volleyball, Archery, Golf and e-Sports.

Intramural Sports are a way for students to compete in a fun atmosphere against other students from Alfred University. A variety of sports are offered throughout the school both in-person or virtually. To get more information about what is currently being offered or sign-up, check out our [schedule](#).

Past intramurals included: soccer, basketball, flag football, pickleball and 3-on-3 basketball.

Housing and Dining Services

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.

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

Trained undergraduate Resident Assistants live in each building. Our first year Living Learning Communities also have a Living Learning and Area Coordinator to support the operation of the building and student success.

The Director of Residential Communities and Associate Director are 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 Alfie 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.

Career Development Center Services

Career Development Center (CDC) 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, including professional document review, interview preparation, and job/ internship search assistance.
- Discover internships and full- and part-time jobs, explore the Gibbs Online Career Resource Library, and access career assessments.

- 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.
- 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.

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](#)

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

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.

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.

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.

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.

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

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.

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

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.

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 will not tolerate any form of hazing. Due to the serious nature of hazing and the unique situational pressures to which victims of hazing are subjected, the University has a procedure solely to address allegations of hazing. To the extent they do not conflict with this procedure, the normal rules and procedures of the University shall apply.

Alfred University's definition of hazing is broader than the New York State Penal Law which defines Hazing in the first degree as: "... 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." (N.Y. Penal Law, §120.16). Hazing in the first degree is a Class A misdemeanor and conviction carries a potential penalty of a fine of up to \$1,000, one year in jail. Hazing in the second degree (a violation) incorporates a nearly identical definition except that no actual injury to any person needs to be proven (N.Y. Penal Law, §120.17).

Alfred University defines hazing as "any activity expected of someone who is initiating into or affiliated with a group, that humiliates, degrades, abuses, or endangers, regardless of the person's willingness to participate. Furthermore, this definition includes any action which results in the disruption of the educational process, the impairment of academic performance, or failure to properly fulfill obligations to University sponsored groups or organizations." Examples of hazing include, but are not limited to the following: depriving a person of sufficient sleep, paddling or beating a person, requiring or encouraging a person to consume alcohol, drugs or foreign or unusual substances, kidnapping or confining a person, subjecting a person to cruel and unusual psychological conditions.

Any violation or suspected violation of the University's Hazing Policy should be reported immediately to any of the following: the Student Experience, Athletics or Student Activities Offices. In addition, students may also report incidents of hazing to the Alfred Police Department. Any

person who is in violation of this policy may be subject to expulsion from the University. Recognized organizations that are found in violation of this policy may be subject to loss of recognition, distinct and apart from any sanctions to which its members are subject

Authority of University Student Conduct Bodies Jurisdiction

University jurisdiction and discipline under the Alfred University Hazing Policy and Procedures cover the defined conduct whether it occurs on or off University premises.

Where the University Hazing Policy has been violated, a student or organization may be in violation of civil or criminal law as well. Where University and civil law overlap, or where criminal prosecution is pending or foreseen, the University may initiate student conduct action of its own on the same infraction and impose penalties independent of civil and/or criminal authorities.

Reporting Procedures

Accounts of hazing can be submitted by any of the following:

By the individual who believes s/he has experienced hazing;

- By a member of the University Residence Life staff
- Public Safety Office
- Alfred Police Department
- By any other individual who has knowledge of hazing.

Reports of alleged violations must be prepared in writing and submitted to any of the following: the Student Experience, Athletics or Student Activities Offices. In addition, incidents of hazing may also be reported to the Alfred Police Department. An incident should be reported within 48 hours, although reports may be accepted at any time. People are encouraged to report incidents as soon after their occurrence as possible, as the passage of time will impede efforts to investigate allegations and gather evidence.

The Dean of Student Experience or designee shall review all reports in consultation with staff and determine whether charges will be issued. If it is determined that the student or organization will be charged, the Dean of Student Experience will refer the case to the hearing board for hazing violations.

President's Committee on Inclusivity and Cultural Events

The Alfred University President's Committee on Inclusivity and Cultural Events works to promote inclusion on campus through a variety of cultural activities. Several campus

organizations sponsor and host appearances by visiting artists, speakers, lecturers, and performers, organized by groups such as the Student Activities Board (SAB) and individual academic divisions. These include several popular entertainers, 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 and Inclusion which is central to Alfred University's Mission and Vision.

The Institute is a student-led and focused resource center that actively works in engaging students in the creation and maintenance of 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:

- The African Student Association
- Poder LatinX (AU's Hispanic Culture and Heritage Organization)
- 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.")
- Muslim Student Association
- United Alfred (AU's LGBTQAI+ Group for all students)

Each organization represents various cultural and identity groups.

Notable events organized by the Institute include the MLK Week Celebration, Unity Day Celebration, Black History Month Film Festival, and various Heritage Month Celebrations. These events, alongside other cultural activities, are integral to Alfred University's commitment to fostering an inclusive campus culture.

University Degree Requirements

University-Wide General Education Goals

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](#) and the [Division of Performing Arts](#) 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 & 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.

Baccalaureate 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)

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.

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](#).

Common Ground Requirement

The University Common Ground requirement
An inclusive experience for first-year and transfer students

Since its founding in 1836, Alfred University has been well-known for being fully inclusive of all people. It was the first

institution in the nation to offer women full access to the whole curriculum, and was among the first to admit Native American and African American students.

Common Ground, as its name implies, provides true common ground between students regardless of their academic interests, and complements our other [first-year experience programs](#) which are unique to their respective colleges and schools.

Common Ground integrates our new students into the Alfred University community through discussions in which students will hear the stories of their peers from different backgrounds, interrogate their assumptions about other people or places, get more comfortable talking about sensitive topics like race, gender, sexual orientation, and socioeconomic class, and articulate the values that they will live by as citizens of the Alfred community.

These discussions will give administrators, faculty, and staff a chance to learn about our incoming class, too. The perspectives of all of our students at Alfred matter, and we want to start learning from each other as soon as our newest community members join us.

Lifetime Health and Wellness Requirement

One of the learning outcomes for Alfred University students is the lifetime health & wellness general education learning outcome. Alfred University students learn about wellness through many Student Experience programs combined with the Lifetime Health and Wellness graduation requirement. As a result of these experiences, Alfred University students will be able to describe and explain the interconnections between physical fitness, healthy lifestyle decisions, and well-being across the lifespan.

The Lifetime Health and Wellness graduation requirement has two components: the physical activity portion (PFIT) and the Wellness portion (WELL).

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.

Courses that carry the PFIT or the WELL attributes can be found by searching for these attributes in the courses portion of the catalog.

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
Interdisciplinary Performing Arts-Music Perform.	1004	BFA
Interdisciplinary Performing Arts-Perform. Design & Tech.	1001	BFA
Interdisciplinary Performing Arts-Sound Stud.	1099	BFA
Interdisciplinary Performing Arts-Theatre	1007	BFA
Interdisciplinary Performing Arts-Dance	1008	BFA
Life and Physical Sciences	4902	BA
Marketing	0509	BS
Materials Science and Engineering	0915	BS
Mathematics	1701	BA or BS
Mathematics with Actuarial Science	1701	BS
Mechanical Engineering	0910	BS
Middle Childhood/Adolescence Educ-Earth Science	1917.01	BA
Middle Childhood/Adolescence Educ-Social Studies	2201.01	BA
Middle Childhood/Adolescence Educ-Biology	0401.01	BA
Middle Childhood/Adolescence Educ-Chemistry	1905.01	BA
Middle Childhood/Adolescence Educ-English	1501.01	BA
Middle Childhood/Adolescence Educ-French	1102.01	BA
Middle Childhood/Adolescence Educ-Math	1701.01	BA
Middle Childhood/Adolescence Educ-Physics	1902.01	BA
Middle Childhood/Adolescence Educ-Spanish	1105.01	BA
Music	1005.00	BA

Major	HEGIS Code	Degree Awarded
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

Academic Policies

Academic Regulations

Follow the [link](#) for a complete list and descriptions of our academic regulations.

- [Jurisdiction, Changes and Distribution](#)
- [Graduation Requirements](#)
- [Credits, Grades and Grade Point Average](#)
- [Classification of Students and Academic Standing](#)
- [Registration, Scheduling and Attendance](#)
- [Withdrawal, Leave of Absence and Readmission](#)
- [Academic Dishonesty \(Unethical Practices\)](#)
- [Miscellaneous](#)
- [Appendix A](#)
- [Appendix B](#)

Registration, Scheduling and Attendance

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.

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 policies 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.

Academic Load Expectations

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.

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.

Enrollment Status and Classification

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+

Grade Policies

Credits, Grades and Grade Point Average (GPA)

The following grade designations are used at the undergraduate level:

Grade	Grade Point 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

- 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
- 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 Credit

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.

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.

Leave of Absence/Withdrawal and Readmission

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.)

Readmission

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.

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.

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.

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.

Code of Honor and Academic Dishonesty

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.

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.

Procedures First Offense

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

- Before a formal charge of academic dishonesty is made, the instructor is strongly encouraged to have 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 for 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.

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.

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.

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.

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.

Academic Classification, Standing, and Honors

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

Credit by Standardized Exams

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 must ensure that their official exam scores are sent to the Office of the Registrar within one year of admission by requesting them through [College Board](#). Scores received after this time cannot be counted as credit toward the degree.

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

AP Examination	Credit-Granting Score	Credit Hours Granted	Equivalent AU Course/ Degree Requirement Area
Art History	4 or 5	4	ARTH 100 (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 or 5	4	MATH 151 (03-QR) (w/Calc AB Subscore of 4 or 5) MATH 151 (03-QR) and MATH 152
Chemistry	4 5	8	CHEM 105 and CHEM 105L (Area F-I) CHEM 105 and 105L and CHEM 106 and CHEM 106L (Area F-I)
Comparative Government & Politics	4 or 5	4	POLS 100 (Area E2)
Computer Science A	3, 4, or 5	4	CSCI 156
Computer Science AB	3 4 or 5	4 8	CSCI 156 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 5	4 6	ENGL 101 (01-WR) ENGL 101 (01-WR) + 2 Cr Elective
English Literature and Composition	4 5	4 6	ENGL 101 (01-WR) ENGL 101 (01-WR) + 2 Cr Elective
Environmental Science	4 or 5	4	ENVS 101
European History	4 5	4 8	HIST 110 (Area D) HIST 110 and HIST 111 (Area D)
French Language	3 or 4 5	4	FREN 102 (02-FL) FREN 202 (FL)
French Literature	4 or 5	4	FREN 102 (02-FL)
German Language	3 or 4 5	4	GRMN 102 (02-FL) GRMN 202 (02-FL)
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 5	4 8	PHYS 111 (Area F-I) PHYS 111 and PHYS 112 (Area F-I)
Physics C: Elec & Magnet	4 or 5	4	PHYS 126 (Area F-I)

AP Examination	Credit-Granting Score	Credit Hours Granted	Equivalent AU Course/ Degree Requirement Area
Physics C: Mechanics	4 or 5	4	PHYS 125 (Area F-I)
Psychology	4 or 5	4	PSYC 101 (Area E1)
Spanish Language	3 4 5	4 4 4	SPAN 102 (02-FL) SPAN 201 (02-FL) 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 – 2D (General)	4 or 5	3	ART 100 (Area C)
Studio Art – 3D (General)	4 or 5	3	ART 100 (Area C)
Studio Art – Drawing	4 or 5	4	ART 100 (Area C)
U.S. Government & Politics	4 or 5	4	POLS 110 (Area E2)
U.S. History	4 5	4 8	HIST 211 (Area D) HIST 211 and HIST 212 (Area D)
World History	4 5	4 8	HIST 100 (Area D) HIST 100 (Area D) +4 Cr History Elective

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*	3	ENGL 220
Analyzing & Interpreting Literature	50*	3	General Elective
College Composition Modular	50*	3	ENGL 101
English Composition	n/a	3	none
English Literature	50*	3	ENGL 220
Humanities	n/a	none	none
*Credit is granted only with an acceptable locally-graded essay			
Foreign Languages			

CLEP Examination	Credit-Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
French	50-61 62+	4 8	FREN 101 (02-FL) FREN 101/FREN 102 (02-FL)
German	50-62 63+	4 8	GRMN 101 (02-FL) GRMN 101/GRMN 102 (02-FL)
Spanish	50-65 66+	4 8	SPAN 101 (02-FL) SPAN 101/SPAN 102 (02-FL)
History & Social Sciences			
American Government	50	3	POLS 110 (Area E2)
Business Accounting, Principles of	50	3	ACCT 211
Business Law, Intro	50	3	LAW 241
Educational Psychology	50	3	General Elective
Human Growth and Development	50	3	General Elective
Information Sys/Computer Apps	50	3	MIS 101
Macroeconomics, Princ of	50	3	ECON 202
Management, Principles of	50	3	MGMT 328
Microeconomics, Princ of	50	3	ECON 201 (Area E2)
Principles of Marketing	50	4	MTKG 221
Psychology, Introductory	50	3	PSYC 101 (Area E1)
Social Sciences & History	n/a	none	none
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)
Science and Mathematics			
Algebra-Trigonometry	50	3	MATH 118 (03-QR)
Biology	50	4	BIOL 100 (Area F-II)
Calculus with Elementary Functions	50	3	MATH 151 (03-QR)

CLEP Examination	Credit-Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
Chemistry	50	4	CHEM 100 (Area F-II)
Chemistry	65+	8	CHEM 105, 106
College Algebra	50	3	MATH 115 (03-QR)
College Mathematics	50	4	MATH 101 (03-QR)
Natural Science	n/a	none	none
Pre Calculus	50	4	MATH 100
Trigonometry	50	3	General Elective

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
Biology (HL)	4*	4	BIOL 100 (Area F-I)
Biology (HL)	5	4	BIOL 100 (Area F-I)
Biology (HL)	5*-7	4	BIOL 100 (Area F-I)
Biology (HL)	6-7	8	BIOL 101/102 (Area F-I)
Chemistry (HL)	4*-5	4	CHEM 103 (Area F-I)
Chemistry (HL)	5*-7	4	CHEM 103 (Area F-I)
Chemistry (HL)	6 7	4	CHEM 105 (Area F-I) CHEM 105, 106 (Area F-I)
Economics (HL)	4*-5	4	ECON 201 (Area E2)
Economics (HL)	6-7	7	ECON 201, 202 (4 Cr. Area E2)
History of Americas (HL)	4*-5	4	HIST 211 (Area D)
History of Americas (HL)	6-7	8	HIST 211, 212 (Area D)
History of Europe (HL)	4*-5	4	HIST 107 (Area D)

IB Examination (level)	Credit Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
History of Europe (HL)	6-7	8	HIST 107, 200 (Area D)
Language A (English): Language and Literature (HL)	4*-5	4	ENGL 101 (01)
Language A (English): Language and Literature (HL)	6-7	8	ENGL 101, 102 (01)
Language A (English): Literature (HL)	4-5	4	ENGL 220
Language A (English): Literature (HL)	6-7	8	ENGL 220
Languages (HL)	4*-5	4	(Lang) 101 (02)
Languages (HL)	6-7	8	(Lang) 101, 102 (02)
Mathematics (HL)	4*-5	4	MATH 101 (03)
Mathematics (HL)	6-7	8	MATH 101, 115 (03)
Physics (HL)	4*-5	4	PHYS 111 (Area F-I)
Physics (HL)	6-7	8	PHYS 111, 112 (Area F-I)
Psychology (HL)	4*-5	4	PSYC 101 (Area E1)
Psychology (HL)	6-7	8	PSYC 101 (Area E1), PSYC 100 (psychology elective)
Social & Cultural Anthropology (HL)	4-5	4	ANTH 110 (Area E3)
Social & Cultural Anthropology (HL)	6-7	4	ANTH 110 (Area E3)
Theatre (HL)	4*-5	4	THEA 110 (Area C)
Theatre (HL)	6-7	8	THEA 110, 200 (4 Cr. Area C)
Theory of Knowledge	B or A	4	PHIL 101 (Area B)
Visual Arts (HL)	4*-5	4	ART 100 (Area C)
Visual Arts (HL)	6-7	8	ART 100 (Area C)
*Please Note: a 4 is considered for equivalent credit on HL exams only for students who have earned the IB Diploma			
Economics (SL)	5*-7	4	ECON 201 (Area E2)
History of Americas (SL)	5*-7	4	HIST 211 (Area D)
History of Europe (SL)	5*-7	4	HIST 107 (Area D)
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
Languages (SL)	5*-7	4	(Lang) 101 (02)
Literature and Performance (SL)	SL 5 w/ IB diploma or 6-7	4	ENGL 220

IB Examination (level)	Credit Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
Mathematical Studies (SL)	5*-7	4	MATH 101 (03)
Mathematics (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)
Social & Cultural Anthropology (SL)	5-7	4	ANTH 110 (Area E3)
Theatre (SL)	5*-7	4	THEA 110 (Area C)
Visual Arts (SL)	5*-7	4	ART 100 (Area C)
*Please Note: a 5 is considered for equivalent credit on SL exams only for students who have earned the IB Diploma			

Veteran Information

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.

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.

Academic Resources

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](#)

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](#)

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.

Study Abroad

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 in 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 required 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.

School of Art & Design

Overview

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

The School of Art & Design offers four undergraduate minors:

- [Art History Minor](#)
- [Technical Minor](#)
- [Art Minor](#)
- [Museum and Gallery Practices Minor](#)

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 and cannot be taken more than once.

- [ART 111](#) - Drawing for Non-Art Majors (4 credit hours)
- [ART 121](#) - Sculpture for Non-Majors (4 credit hours)
- [ART 122](#) - Glass Studio for Non-Majors (4 credit hours)
- [ART 133](#) - Photography for Non-Majors (4 credit hours)
- [ART 146](#) - Painting 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.

Departments/Divisions

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 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.

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.

Business 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.

Course Code	Title	Credits
BUSI 105	Business Perspectives	1

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.

Course Code	Title	Credits
ENGL 101	Writing I	4
ENGL 103	Business Writing	4

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.

Choose one:

Course Code	Title	Credits
MATH 101	Communicating with Numbers	4
MATH 104	Quantitative Methods for Business	4
MATH 151	Calculus I	4
MATH 152	Calculus II	4
MATH 181	Discrete Mathematics	4
BUSI 150	Business Analytics Math	3

Humanities

Each student must complete three to 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 to 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 to 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.

Approved Courses for General Education Program

Courses that have been determined to meet the general education requirements above and arts and science elective requirements for the College of Business and the School of Engineering carry the attributes “CoB: Humanities”, “CoB: Natural Science”, “CoB: Quant reasoning”, or “CoB: Social Science”, and may be found by searching for these attributes in “Courses.” 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.

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. 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.

	Total Credits	60
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Majors, Double Majors, and Minors

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.

Double Majors

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.

Minors

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.

Business Professional Core Courses

The Bachelor of Science business degree is composed of business professional core courses shared by all majors. Business students are expected to maintain a 2.0 grade point average in the Business Professional Core classes.

Business Professional Core Requirements

Course Code	Title	Credits
ACCT 211	Financial Accounting	3
ACCT 212	Managerial Accounting	3
BUSI 105	Business Perspectives	1
BUSI 106	Contemporary Business	3
BUSI 113	Descriptive Analytics & Statistics	3
BUSI 213	Research Methods	3
	BUSI 457, BUSI 305, ECON 412, FIN 458, MKTG 489, or EQUUS 228	2-4
BUSI 457	International Business	3
BUSI 305	German Auto Industry	4
ECON 412	International Economics	3
FIN 458	International Financial Management	3
MKTG 489	International Marketing	3
EQUUS 228	The Equine Industry in Ireland	2
BUSI 499	Business Policy	3
FIN 348	Managerial Finance	3
LAW 241	The Legal Environment of Business	3
	MATH 104, MATH 151, MATH 181, or BUSI 150*	3-4
MATH 104	Quantitative Methods for Business	4
MATH 151	Calculus I	4
MATH 181	Discrete Mathematics	4
BUSI 150	Business Analytics Math	3
MGMT 328	Management and Organizational Behavior	3
MGMT 484	Operations Management	3
MIS 101	Analytics I	3
MIS 390	Introduction to Management Information Systems	3
MKTG 221	Marketing Principles and Management	3
ECON 201	Principles of Microeconomics	3
ECON 202	Principles of Macroeconomics	3
	Sub-Total Credits	51-54

*[BUSI 150](#) required for Finance and Analytics Majors

Business Analytics and Data Analytics majors may substitute [MATH 381](#), [ENGR 305](#), [POLS 230](#), [SOCI 230](#) or [PSYC 220](#) for [BUSI 113](#)

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)

	Total Credits	51-54
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Departments/Divisions

Business

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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.

Accounting BS

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 and all accounting courses listed. Additionally they should complete the business general education program and elective courses to meet the 120 minimum credit requirement. Courses listed above must include 60 hours of liberal arts elective courses to complete NYS degree requirements for a Bachelor of Science. University requirements should be met but do not count towards the 120 credit minimum.

Business Core Courses

Complete the [Business Professional Core Courses](#)

	Sub-Total Credits	51-54
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Major Requirements:

Take all accounting courses listed below:

Course Code	Title	Credits
ACCT 361	Intermediate Accounting I	3
ACCT 362	Intermediate Accounting II	3

ACCT 371	Personal Income Tax	3
ACCT 372	Cost Accounting	3
ACCT 441	Auditing Theory and Practice	3
ACCT 462	Advanced Accounting	3
ACCT 471	Corporate Taxation	3
	An upper level Finance course (300 or 400 level)	3
LAW 442	Commercial Law	3
	Sub-Total Credits	48

* [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 General Education Requirements

Business students must complete the [Business General Education Requirements](#).

	Sub-Total Credits	60
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University Requirement

The university requirements must also be fulfilled, but do not count towards the 120 credit total for College of Business degrees. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Wellness](#)

General Electives

Take as many [Approved Liberal Arts and Science Courses](#) as need to complete a total of 120 credits, and to fulfill the Liberal Arts and Science 60 credit requirement.

	Total Credits	120
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Accounting Double Major

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.

Business Professional Core Courses

[Business Professional Core Courses](#)

	Sub-Total Credits	51-54
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Major Requirements

Course Code	Title	Credits
ACCT 211	Financial Accounting	3
ACCT 212	Managerial Accounting	3
ACCT 361	Intermediate Accounting I	3
ACCT 362	Intermediate Accounting II	3
ACCT 371	Personal Income Tax	3
ACCT 372	Cost Accounting	3
ACCT 441	Auditing Theory and Practice	3
ACCT 462	Advanced Accounting	3
ACCT 471	Corporate Taxation	3
ENGL 101	Writing I	4
	FIN 300+	1-3
LAW 442	Commercial Law	3
	Sub-Total Credits	35-37
	Total Credits	86-91

Accounting Minor

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

Course Code	Title	Credits
ACCT 211	Financial Accounting	3
ACCT 212	Managerial Accounting	3
ACCT 361	Intermediate Accounting I	3
	BUSI 113, ENGR 305, POLS 230, PSYC 221, or SOCI 230	3-4
ECON 201	Principles of Microeconomics	3
ECON 202	Principles of Macroeconomics	3
	BUSI 150, MATH 104, or MATH 151	3-4

Sub-Total Credits		21-23
Plus two courses (6 Credits) from the following:		
Course Code	Title	Credits
ACCT 310	Forensic Accounting Introduction	3
ACCT 362	Intermediate Accounting II	3
ACCT 371	Personal Income Tax	3
ACCT 372	Cost Accounting	3
ACCT 462	Advanced Accounting	3
ACCT 471	Corporate Taxation	3
Sub-Total Credits		6
Total Credits		28

Arts Management Minor

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 & Design, and the College of Liberal Arts and Sciences and is open to all AU students.

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.

Requirements for the Arts Management Minor

Course Code	Title	Credits
ACCT 211	Financial Accounting	3
BUSI 485	Internship	1-4
ECON 201	Principles of Microeconomics	3
MKTG 221	Marketing Principles and Management	3
Sub-Total Credits		10-13

Choose one additional business course from the following:

Course Code	Title	Credits
BUSI 301	Family Business Management	3
BUSI 439	Entrepreneurship in the 21st Century	3
Sub-Total Credits		3

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

Section A-History and Theory

Course Code	Title	Credits
ARTH Art History (any course)		2-4
DANC 211	Dance History	4
MUSC 110	Music Appreciation	4
MUSC 211	World Music	4
PHIL 283	Philosophy of the Arts I	4
PHIL 300	Topics in Philosophy	1-4
THEA 110	Introduction to Theatre	4
THEA 311	Classical World Theatre: History Art Politics & Society	4
THEA 200/300/400		1-4
THEA 200	Special Topics	1-4
THEA 300	Special Topics	1-4
THEA 400	Special Topics	1-4

Section B-Applied and Studio Skills Courses

Course Code	Title	Credits
ART 111	Drawing for Non-Art Majors	4
ART 121	Sculpture for Non-Majors	4
ART 133	Photography for Non-Majors	4
ART 151	Ceramics for Non-Majors	4
ART 389	Exhibition Design & Practice	2
DANC Dance (any course)		1-4
ENGL 200	Special Topics in Writing	2-4
ENGL 202	Fiction Workshop	4
ENGL 205	Playmaking: From Writing to Devising For the New Era	4
ENGL 206	Poetry Workshop	4
ENGL 472	Dramatis Personae	4
ENGL 474	Writing the Short Story	4
ENGL 475	Writing Formal Poetry	4
PDAT 120	Technical Theatre	4
PDAT 220	Design Fundamentals for Stage Dance and Film	4
PDAT 270	Play Production	2
THEA 200/300/400		1-4
THEA 200	Special Topics	1-4
THEA 300	Special Topics	1-4
THEA 400	Special Topics	1-4
Sub-Total Credits		12-13
Total Credits		25-29

Business Administration BS

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 Core Courses

[Business Professional Core Courses](#)

	Sub-Total Credits	48
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Business General Education Requirements

Business students must complete the [Business General Education Requirements](#).

	Sub-Total Credits	60
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University Requirement

The university requirements must also be fulfilled, but do not count towards the 120 credit total for College of Business degrees. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Wellness](#)

General Electives

Take as many [Approved Liberal Arts and Science Courses](#) as need to complete a total of 120 credits, and to fulfill the Liberal Arts and Science 60 credit requirement.

	Total Credits	120
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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.

Business Professional Core Courses

[Business Professional Core Courses](#)

	Sub-Total Credits	51-54
Major Requirements		
Course Code	Title	Credits
ACCT 211	Financial Accounting	3
ACCT 212	Managerial Accounting	3
BUSI 105	Business Perspectives	1
BUSI 106	Contemporary Business	3
BUSI 113	Descriptive Analytics & Statistics	3
BUSI 213	Research Methods	3
BUSI 499	Business Policy	3
	BUSI 457, ECON 412, FIN 458, MGMT 306, or MKTG 486	3
ECON 201	Principles of Microeconomics	3
ECON 202	Principles of Macroeconomics	3
ENGL 101	Writing I	4
FIN 348	Managerial Finance	3
LAW 241	The Legal Environment of Business	3
	BUSI 150, MATH 104, or MATH 151	3-4
MGMT 328	Management and Organizational Behavior	3
MGMT 484	Operations Management	3
MIS 101	Analytics I	3
MIS 390	Introduction to Management Information Systems	3
MKTG 221	Marketing Principles and Management	3
	BUSI 300+ Electives	8
	Sub-Total Credits	64-65
	Total Credits	115-119

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

Course Code	Title	Credits
ACCT 211	Financial Accounting	3
ACCT 212	Managerial Accounting	3
	BUSI 113, ENGR 305, POLS 230, PSYC 221, or SOCI 230	3-4
ECON 201	Principles of Microeconomics	3
ECON 202	Principles of Macroeconomics	3
FIN 348	Managerial Finance	3
MGMT 328	Management and Organizational Behavior	3
MGMT 484	Operations Management	3
MKTG 221	Marketing Principles and Management	3
	Sub-Total Credits	27-28

Engineers may substitute [ENGR 306](#) for [FIN 348](#).

	Total Credits	27
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Business Analytics BS

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.

Business Core Courses

[Business Professional Core Courses](#)

	Sub-Total Credits	51-54
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Major Requirements:

Take the following Business Analytics requirements:

Course Code	Title	Credits
	BUSI 150 or MATH 151	3-4
DATA 156	Introduction to Computing	3
DATA 201	Analytics II	3
DATA 202	Data Visualization and Analysis	3

DATA 203	Current Topics in Analytics	3
DATA 311	Intro to Database Management	3
DATA 401	Analytics Capstone Project	3
DATA 402	Analytics Seminar	1
ECON 310	Applied Econometrics and Predictive Analytics	3
Sub-Total Credits		25-26

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

Course Code	Title	Credits
BUSI 322	Business Intelligence	3
FIN 322	Finance Analytics	3
FIN 454	Security Analysis	3
MGMT 322	Management Analytics	3
MKTG 322	Marketing Analytics	3
MKTG 452	Market Research	3
MKTG 454	Market Intelligence & Strategy	3
Sub-Total Credits		9

Business General Education Requirements

Business students must complete the [Business General Education Requirements](#).

Sub-Total Credits	60
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University Requirement

The university requirements must also be fulfilled, but do not count towards the 120 credit total for College of Business degrees. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Wellness](#)

General Electives

Take as many [Approved Liberal Arts and Science Courses](#) as need to complete a total of 120 credits, and to fulfill the Liberal Arts and Science 60 credit requirement.

Total Credits	120
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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.

Business Professional Core Courses

[Business Professional Core Courses](#)

	Sub-Total Credits	51-54
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Major Requirements

Course Code	Title	Credits
DATA 156	Introduction to Computing	3
DATA 201	Analytics II	3
DATA 202	Data Visualization and Analysis	3
DATA 203	Current Topics in Analytics	3
DATA 311	Intro to Database Management	3
DATA 401	Analytics Capstone Project	3
DATA 402	Analytics Seminar	1
ECON 310	Applied Econometrics and Predictive Analytics	3
	Analytics Electives	9
	Sub-Total Credits	31
	Total Credits	82-85

Business Analytics Minor

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

Course Code	Title	Credits
ACCT 211	Financial Accounting	3
BUSI 113	Descriptive Analytics & Statistics	3
	BUSI 150 or MATH 151	3-4
	CSCI 156 or DATA 156	3-4
DATA 201	Analytics II	3
DATA 202	Data Visualization and Analysis	3
MIS 101	Analytics I	3
	Sub-Total Credits	21-23

MATH 381, ENGR 305, POLS 230, SOCI 230 or PSYC 220 may be taken as a substitute for BUSI 113

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

Course Code	Title	Credits
BUSI 322	Business Intelligence	3
ECON 310	Applied Econometrics and Predictive Analytics	3
FIN 322	Finance Analytics	3
MGMT 322	Management Analytics	3
MKTG 322	Marketing Analytics	3
MKTG 452	Market Research	3
Sub-Total Credits		6
Total Credits		27

Data Analytics BS

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.

Business Core Courses

[Business Professional Core Courses](#)

Sub-Total Credits	51-54
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Major Requirements:

Take the following Data Analytics requirements:

Course Code	Title	Credits
BUSI 113	Descriptive Analytics & Statistics	3
BUSI 213	Research Methods	3
CSCI 156	Computer Science I	4
CSCI 157	Computer Science II	4
CSCI 205	Database Systems	4
DATA 105	Analytics Perspectives	1
DATA 201	Analytics II	3
DATA 202	Data Visualization and Analysis	3

DATA 203	Current Topics in Analytics	3
DATA 401	Analytics Capstone Project	3
DATA 402	Analytics Seminar	1
ECON 310	Applied Econometrics and Predictive Analytics	3
MATH 151	Calculus I	4
MATH 231	Introduction to Data Science	4
MIS 101	Analytics I	3
MIS 390	Introduction to Management Information Systems	3
Sub-Total Credits		49

Plus, choose 16 credit hours from the following:

Course Code	Title	Credits
ART 232	Introduction to Video and Sonic Arts	4
ART 285	Digital Drawing	4
ART 332	Advanced Video Arts	4
ART 335	Interactive Media Studio	4
ART 336	Generative and Interactive Animation	4
ART 340	Design for Web and Mobile Devices	4
BIOL 405	Bioinformatics	4
BUSI 322	Business Intelligence	3
CSCI 200+ (Any CSCI 200+ not already included)		
DATA 203	Current Topics in Analytics	3
	ENVS/GEOL 206 Fieldcraft-Outdoor Proficiency	4
ENVS 212	Introduction to Remote Sensing	4
ENVS 220	Introduction to Geographic Information Systems	4
ENVS 301	Contemporary Topics in Geospatial Technology	2
ENVS 302	Mobile and Web-based GIS	4
ENVS 320	Advanced GIS Applications	4
	ENVS/GEOL 450 Independent Study	1-4
FIN 322	Finance Analytics	3
FIN 454	Security Analysis	3
MATH 271	Differential Equations	3
MATH 351	Introduction to Operations Research	4
MATH 382	Actuarial Exam Preparation	1
MATH 391	Statistical Methods	3
MATH 401	Advanced Engineering Mathematics	4
MGMT 322	Management Analytics	3
MGMT 484	Operations Management	3
MKTG 322	Marketing Analytics	3
MKTG 452	Market Research	3
Sub-Total Credits		16

Business General Education Requirements

Business students must complete the [Business General Education Requirements](#).

	Sub-Total Credits	60
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University Requirement

The university requirements must also be fulfilled, but do not count towards the 120 credit total for College of Business degrees. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Wellness](#)

General Electives

Take as many [Approved Liberal Arts and Science Courses](#) as need to complete a total of 120 credits, and to fulfill the Liberal Arts and Science 60 credit requirement.

	Total Credits	120
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Data Analytics Double Major

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

Business Professional Core Courses

[Business Professional Core Courses](#)

	Sub-Total Credits	51-54
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Major Requirements

Course Code	Title	Credits
CSCI 156	Computer Science I	4
CSCI 205	Database Systems	4
DATA 201	Analytics II	3
DATA 202	Data Visualization and Analysis	3
DATA 203	Current Topics in Analytics	3
DATA 401	Analytics Capstone Project	3
DATA 402	Analytics Seminar	1
MIS 101	Analytics I	3
	Level I Statistics	3-4
BIOL 226	Biostatistics	4
BUSI 113	Descriptive Analytics & Statistics	3
ENGR 305	Engineering Statistics	3

ENVS 205	Environmental Data Analysis	4
POLS 230	Introduction to Data Analysis and Statistics	4
SOCI 230	Introduction to Data Analysis and Statistics	4
PSYC 220	Psychological Methods and Statistics	4
	Level II Statistics	3-4
ECON 310	Applied Econometrics and Predictive Analytics	3
MATH 231	Introduction to Data Science	4
MATH 381	Mathematical Statistics	4
PSYC 411	Advanced Psychological Research Methods and Statistics	4
	Research Methods	3-4
BIOL 226	Biostatistics	4
BUSI 213	Research Methods	3
ENVS 205	Environmental Data Analysis	4
POLS 431	Research Design and Strategies	4
SOCI 431	Research Design and Strategies	4
PSYC 220	Psychological Methods and Statistics	4
PSYC 411	Advanced Psychological Research Methods and Statistics	4
	Sub-Total Credits	33-36
	Total Credits	84-90

Data Analytics Minor

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

Course Code	Title	Credits
BUSI 113	Descriptive Analytics & Statistics	3
CSCI 156	Computer Science I	4
DATA 201	Analytics II	3
MATH 151	Calculus I	4
MIS 101	Analytics I	3
	Sub-Total Credits	17

[MATH 381](#), [ENGR 305](#), [POLS 230](#), [SOCI 230](#) or [PSYC 220](#) may be taken as a substitute for [BUSI 113](#)

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

Course Code	Title	Credits
ART 232	Introduction to Video and Sonic Arts	4
ART 285	Digital Drawing	4

ART 332	Advanced Video Arts	4
ART 335	Interactive Media Studio	4
ART 336	Generative and Interactive Animation	4
ART 340	Design for Web and Mobile Devices	4
BUSI 322	Business Intelligence	3
BIOL 358	Biogeography	4
BIOL 405	Bioinformatics	4
	CSCI 200+ (Any CSCI 200+ not already included)	
CSCI 311	Database Systems	4
DATA 202	Data Visualization and Analysis	3
DATA 402	Analytics Seminar	1
DATA 203	Current Topics in Analytics	3
DATA 401	Analytics Capstone Project	3
ECON 310	Applied Econometrics and Predictive Analytics	3
ENVS 206	Fieldcraft-Outdoor Proficiency	4
ENVS 212	Introduction to Remote Sensing	4
ENVS 220	Introduction to Geographic Information Systems	4
ENVS 301	Contemporary Topics in Geospatial Technology	2
ENVS 302	Mobile and Web-based GIS	4
ENVS 320	Advanced GIS Applications	4
ENVS 450	Independent Study	1-4
FIN 322	Finance Analytics	3
FIN 454	Security Analysis	3
GEOL 206	Fieldcraft-Outdoor Proficiency	4
GEOL 450	Independent Study	1-4
MATH 231	Introduction to Data Science	4
MATH 271	Differential Equations	3
MATH 351	Introduction to Operations Research	4
MATH 382	Actuarial Exam Preparation	1
MATH 391	Statistical Methods	3
MATH 401	Advanced Engineering Mathematics	4
MGMT 322	Management Analytics	3
MGMT 484	Operations Management	3
MIS 390	Introduction to Management Information Systems	3
MKTG 322	Marketing Analytics	3
MKTG 452	Market Research	3
	Sub-Total Credits	8
	Total Credits	28

Economics Minor

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

Course Code	Title	Credits
ECON 201	Principles of Microeconomics	3
ECON 202	Principles of Macroeconomics	3
	ECON 300+ Upper-level Economics Course	3
	ECON 300+ Upper-level Economics Course	3
ECON 460	Seminar in Economics	3
	Sub-Total Credits	15
	Total Credits	15

Equine Business Management BS

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 major requirements.

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

Business Professional Core Courses

[Business Professional Core Courses](#)

	Sub-Total Credits	51-54
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Major Requirements

Course Code	Title	Credits
BUSI 439	Entrepreneurship in the 21st Century	3
LAW 442	Commercial Law	3
MGMT 485	Equestrian Operations Managmnt	3
MKTG 382	Sales Marketing	3

MGMT 229	Intro to Equine Busi Managment	3
MGMT 330	Farm and Stable Management	3
Sub-Total Credits		18

Business General Education Requirements

Business students must complete the [Business General Education Requirements](#).

Sub-Total Credits	60
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University Requirement

The university requirements must also be fulfilled, but do not count towards the 120 credit total for College of Business degrees. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Wellness](#)

General Electives

Take as many [Approved Liberal Arts and Science Courses](#) as need to complete a total of 120 credits, and to fulfill the Liberal Arts and Science 60 credit requirement.

Total Credits	120
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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.

Business Professional Core Courses

[Business Professional Core Courses](#)

Sub-Total Credits	51-54
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Major Requirements

Course Code	Title	Credits
BUSI 439	Entrepreneurship in the 21st Century	3
LAW 442	Commercial Law	3
MGMT 229	Intro to Equine Busi Managment	3

MGMT 330	Farm and Stable Management	3
MGMT 485	Equestrian Operations Managmnt	3
MKTG 382	Sales Marketing	3
Sub-Total Credits		18

Total Credits	69-72
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Equine Business Management Minor

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

Course Code	Title	Credits
ACCT 211	Financial Accounting	3
BUSI 439	Entrepreneurship in the 21st Century	3
MKTG 221	Marketing Principles and Management	3
MKTG 382	Sales Marketing	3
MGMT 229	Intro to Equine Busi Managment	3
Sub-Total Credits		15

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

Course Code	Title	Credits
EQUS 200	Special Topics	1-4
EQUS 205	Introduction to Equine Science	4
EQUS 216	Horse Show Management	4
EQUS 218	Judging Horse Shows	4
EQUS 223	Hunter and Jumping Course Design	2
MGMT 330	Farm and Stable Management	3
Sub-Total Credits		6

Total Credits	21
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Family Business and Entrepreneurship Minor

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

Course Code	Title	Credits
ACCT 211	Financial Accounting	3
BUSI 301	Family Business Management	3
BUSI 439	Entrepreneurship in the 21st Century	3
BUSI 485	Internship	1-4
ECON 201	Principles of Microeconomics	3
LAW 241	The Legal Environment of Business	3
MKTG 221	Marketing Principles and Management	3
Sub-Total Credits		19-22

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

Course Code	Title	Credits
ACCT 371	Personal Income Tax	3
FIN 310	Introduction to Financial Planning	3
LAW 442	Commercial Law	3
Sub-Total Credits		3
Total Credits		23-25

Finance BS

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 major requirements.

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.

Business Core Courses

[Business Professional Core Courses](#)

Sub-Total Credits		51-54
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Major Requirements

Course Code	Title	Credits
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ACCT 361	Intermediate Accounting I	3
ECON 331	Money and Banking	3
FIN 205	Student Managed Investment Fund	1
FIN 206	Student Managed Investment Fund Laboratory	1
FIN 310	Introduction to Financial Planning	3
FIN 454	Security Analysis	3
FIN 455	Business Financial Decisions	3
FIN 458	International Financial Management	3
FIN 460	Seminar in Finance	3
Sub-Total Credits		23

Business General Education Requirements

Business students must complete the [Business General Education Requirements](#).

Sub-Total Credits	60
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University Requirement

The university requirements must also be fulfilled, but do not count towards the 120 credit total for College of Business degrees. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Wellness](#)

General Electives

Take as many [Approved Liberal Arts and Science Courses](#) as need to complete a total of 120 credits, and to fulfill the Liberal Arts and Science 60 credit requirement.

Total Credits	120
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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.

Business Professional Core Courses

[Business Professional Core Courses](#)

	Sub-Total Credits	51-54
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Major Requirements

Course Code	Title	Credits
FIN 205	Student Managed Investment Fund	1
FIN 206	Student Managed Investment Fund Laboratory	1
FIN 310	Introduction to Financial Planning	3
FIN 454	Security Analysis	3
FIN 455	Business Financial Decisions	3
FIN 458	International Financial Management	3
FIN 460	Seminar in Finance	3
	Sub-Total Credits	17
	Total Credits	68-71

Finance Minor

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

Course Code	Title	Credits
ACCT 211	Financial Accounting	3
ACCT 212	Managerial Accounting	3
ECON 201	Principles of Microeconomics	3
ECON 202	Principles of Macroeconomics	3
FIN 310	Introduction to Financial Planning	3
FIN 348	Managerial Finance	3
FIN 455	Business Financial Decisions	3
FIN 458	International Financial Management	3
	Sub-Total Credits	24

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

Course Code	Title	Credits
DATA 203	Current Topics in Analytics	3
DATA 311	Intro to Database Management	3
DATA 401	Analytics Capstone Project	3
DATA 402	Analytics Seminar	1

FIN 205	Student Managed Investment Fund	1
FIN 206	Student Managed Investment Fund Laboratory	1
FIN 306	Student Managed Investment Fund Advanced Laboratory	2
FIN 322	Finance Analytics	3
FIN 343	Real Estate Financing and Investment	3
FIN 454	Security Analysis	3
FIN 460	Seminar in Finance	3
FIN 454	Security Analysis	3
Sub-Total Credits		6

Total Credits	30
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International Business Minor

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

Course Code	Title	Credits
Two Semesters of one Modern Language		8
GLBS 101	Introduction to Global Studies	4
	BUSI 457 or MKTG 489	3
	ECON 412 or FIN 458 or MGMT 306	3
Sub-Total Credits		18

Plus, Complete 1 of the following International Experiences:

Course Code	Title	Credits
Business-related faculty-led travel course abroad		3
Internship Abroad		3
One full semester of study abroad		12
GLBS 485	Internship in Global Studies	1-4
GLBS 450	Independent Study	1-4
Sub-Total Credits		3-12
Total Credits	21-30	

Leadership Minor

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:

Course Code	Title	Credits
	SJST 101, SJST 110, or SOCI 110	4
	LEAD 201 or WGST 201	2
	LEAD 475 or WGST 475	2
MGMT 328	Management and Organizational Behavior	3
	Sub-Total Credits	11

Plus, Complete at least 10 credits of the following:

Course Code	Title	Credits
ATHT 432	Organization and Administration of Athletics	2
COAC 291	Philosophy Principles and Organization of Athletics in Education	3
COAC 475	Theories and Techniques of Coaching Sports	2
COMM 210	Interpersonal Communication	4
COMM 309	Persuasion: Reception and Responsibility	4
COMM 315	Understanding Global Media and Cultural Change	4
COMM 325	Global Communication	4
COMM 401	Technology and Communication	4
COMM 409	Organizational Communication	4
COMM 410	Communication Ethics	4
COMM 465	Gender Race Class and Media	4
ECON 425	Wealth and Inequality	4
ENGL 222	The Harlem Renaissance	4
ENGL 256	Multicultural American Literature	4
ENVS 214	Environment Politics and Society	4
GERO 118	Introduction to Adult Development and Aging	4
LEAD 100	Topics in Leadership	1-4
LEAD 300	Special Topics in Leadership	1-4
LEAD 301	Improving Alfred University	2
LEAD 476	Service Leadership Experience	2
PHIL 281	Ethics	4
PHIL 306	Personal Identity and the Self	2
POLS 150	World Politics	4
POLS 214	Environment Politics and Society	4
POLS 253	Dictatorship and Democracy	4

POLS 355	Public Policy	4
POLS 356	Social Movements	4
PSYC 282	Social Psychology	4
SJST 201	Women and Gender in Society	4
SOCI 242	Social Problems	4
SOCI 253	Social Welfare Institutions	4
SOCI 355	Power Privilege and Inequality	4
UNIV 115	Concepts of Service Learning	2
WGST 101	Women and Gender in Society	4
WGST 305	Gender and Organizations	3
Sub-Total Credits		10
Total Credits		21

Marketing BS

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 Marketing major 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.

Business Core Courses

[Business Professional Core Courses](#)

Sub-Total Credits	51-54
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Major Requirements:

Course Code	Title	Credits
MKTG 311	Digital & Social Media Mrkting	3
MKTG 452	Market Research	3
MKTG 379	Consumer Behavior	3
MKTG 486	Integrated Marketing Communications	3
MKTG 499	Strategic Marketing Management	3
MKTG 489	International Marketing	3
Sub-Total Credits		18

Plus, choose 3 credit hours from the following:

Course Code	Title	Credits
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MKTG 453	Marketing Practicum	3
MKTG 382	Sales Marketing	3
MKTG 322	Marketing Analytics	3
MKTG 460	Seminar in Marketing	3
Sub-Total Credits		3

Business General Education Requirements

Business students must complete the [Business General Education Requirements](#).

Sub-Total Credits		60
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University Requirement

The university requirements must also be fulfilled, but do not count towards the 120 credit total for College of Business degrees. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Wellness](#)

General Electives

Take as many [Approved Liberal Arts and Science Courses](#) as need to complete a total of 120 credits, and to fulfill the Liberal Arts and Science 60 credit requirement.

Total Credits	120
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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

Business Professional Core Courses

[Business Professional Core Courses](#)

Sub-Total Credits		51-54
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Major Requirements

Course Code	Title	Credits
MKTG 311	Digital & Social Media Mrkting	3

MKTG 379	Consumer Behavior	3
MKTG 452	Market Research	3
MKTG 486	Integrated Marketing Communications	3
MKTG 489	International Marketing	3
MKTG 499	Strategic Marketing Management	3
	MKTG 300+ Elective	3
	Sub-Total Credits	21
	Total Credits	72-75

Marketing Minor

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

Course Code	Title	Credits
	BUSI 113, ENGR 305, POLS 230, PSYC 221, or SOCI 230	3-4
ECON 201	Principles of Microeconomics	3
MKTG 221	Marketing Principles and Management	3
MKTG 379	Consumer Behavior	3
	Sub-Total Credits	12-13

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

Course Code	Title	Credits
MKTG 311	Digital & Social Media Mrkting	3
MKTG 322	Marketing Analytics	3
MKTG 452	Market Research	3
MKTG 453	Marketing Practicum	3
MKTG 460	Seminar in Marketing	3
MKTG 382	Sales Marketing	3
MKTG 486	Integrated Marketing Communications	3
MKTG 489	International Marketing	3
MKTG 499	Strategic Marketing Management	3
	Sub-Total Credits	6
	Total Credits	18

Sports Management Minor

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

Sports Management Minor Requirements:

Course Code	Title	Credits
ATHT 232	Introduction to Sports Management	3
ATHT 242	Sports Society and Ethics	3
ATHT 432	Organization and Administration of Athletics	2
BUSI 485	Internship	1-4
	Any 4 Credit COMM	4
LAW 241	The Legal Environment of Business	3
MGMT 328	Management and Organizational Behavior	3
MKTG 221	Marketing Principles and Management	3
	Sub-Total Credits	22-25
	Total Credits	22-25

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 & 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 & 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
- The University Common Ground 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 three 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 interest in a major 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.

CLAS 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 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. Students are encouraged 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 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 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.

Course Code	Title	Credits
BIOL 226	Biostatistics	4
BUSI 113	Descriptive Analytics & Statistics	3
ENVS 205	Environmental Data Analysis	4
MATH 101	Communicating with Numbers	4
MATH 102	Mathematics for Teachers: Grades K-6	4
MATH 104	Quantitative Methods for Business	4
MATH 151	Calculus I	4
PHIL 282	Introduction to Logic	4
	POLS/SOCI 230 Introduction to Data Analysis and Statistics	4
PSYC 221	Psychological Research Methods and Statistics I	4
PSYC 222	Psychological Research Methods and Statistics II	4

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 and 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.

	Total Credits	54
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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.

Departments/Divisions

Africana Studies

Africana Studies Minor

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.

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.

Core Requirement

Students must take at least one of the following courses:

Course Code	Title	Credits
PSYC 273	Psychology of the African American Experience	2-4
HIST 232	African Kingdoms-Egypt-Kongo	4
HIST 235	African American History Since 1863	4
Sub-Total Credits		4

Elective Courses

Complete the remaining 14 credits by selecting among the following:

Course Code	Title	Credits
DANC 226	Hip Hop Dance	2
DANC 227	African Dance	2
ENGL 434	African-American Literature	4
ENGL 222	The Harlem Renaissance	4
ENVS 301	Contemporary Topics in Geospatial Technology	2
HIST 330	Southern Africa: Between Mandela and Mugabe	2
HIST 377	History of American Slavery	2
LIBR 205	Information and Society	2
SOCI 343	Race and Ethnicity	4
	SJST/SOCI 355 Power Privilege and Inequality	4
SPAN 217	Exiled from Justice: Equatorial Guinean Writers in Africa and Spain	4
	Sub-Total Credits	14

New courses in Africana Studies are often added as topics courses: these may be included in the minor with permission from the Director of Africana Studies or the board. Special topics classes are taught once or twice to capture a specific interest or explore a new area and may count toward the minor as electives. In the past instructors have offered special topics courses in a wide array of subject areas.

	Total Credits	18
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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.

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.

Biochemistry BS

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.

Foundation and Core Courses

Take one of the following:

Course Code	Title	Credits
BIOL 150	Biological Foundations	4
BIOL 155	Biological Foundations: Research Project	4
Sub-Total Credits		4

Take one of the following:

Course Code	Title	Credits
BIOL 212	Principles of Genetics	4
BIOL 213	Structure and Function of Organisms	4
Sub-Total Credits		4

Take all of the following:

Course Code	Title	Credits
BIOL 211	Cell Biology	4
BIOL 226	Biostatistics	4
BCHM 390	Junior Seminar	1
BCHM 420	Biochem: Proteins & Metabolism	4
BCHM 422	BioChem: Nucleic Acids	4
BCHM 490	Senior Seminar	1
CHEM 105	General Chemistry I	3
CHEM 105L	General Chemistry I Laboratory	1
CHEM 106	General Chemistry II	3
CHEM 106L	General Chemistry II Laboratory	1
CHEM 315	Organic Chemistry I	3
CHEM 315L	Laboratory-Organic Chem I	1
CHEM 316	Organic Chemistry II	3
CHEM 316L	Laboratory-Organic Chem II	1
CHEM 321	Introduction to Analytical Chemistry	4
	CHEM 342 or 343	4
	Sub-Total Credits	42

Related Courses

Take all of the following:

Course Code	Title	Credits
MATH 151	Calculus I	4
MATH 152	Calculus II	4
	PHYS 111 or 125	4
	PHYS 112 or 126	4
	Sub-Total Credits	16

Specialization Elective Courses

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)

Sub-Total Credits	8
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CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Biochemistry majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Biology BA

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.

Foundation and Core Courses

Take all of the following:

Course Code	Title	Credits
	BIOL 150 or BIOL 155	4
BIOL 211	Cell Biology	4
BIOL 212	Principles of Genetics	4
BIOL 213	Structure and Function of Organisms	4
BIOL 226	Biostatistics	4
BIOL 314	Community and Systems Biology	4
BIOL 390	Junior Seminar	1
BIOL 490	Senior Seminar	1
	Sub-Total Credits	26

Related Courses

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

Course Code	Title	Credits
CHEM 105	General Chemistry I	3
CHEM 105L	General Chemistry I Laboratory	1
CHEM 106	General Chemistry II	3
CHEM 106L	General Chemistry II Laboratory	1

	One 300-level Chemistry course	3
	Sub-Total Credits	11

Specialization Elective Courses

Take 12 credit hours. Recommend completion of one research intensive* course.

Course Code	Title	Credits
BIOL 300	Topics in Biology	1-4
BIOL 302	General Microbiology	4
BIOL 306	Human Pathophysiology	4
BIOL 307	Anatomy and Physiology: Nerves Muscles Skeleton	4
BIOL 308	Anatomy and Physiology: Viscera	4
BIOL 315	Genetics and Evolution of Populations	4
BIOL 320	Toxicology	4
BIOL 322	Botany	4
BIOL 324	Phage Genomics	2
BIOL 346	Animal Nutrition	4
BIOL 348	Animal Behavior	4
BIOL 353	Tropical Biology	4
BIOL 354	Ecology	4
BIOL 357	Conservation Biology	4
BIOL 375	Comparative Vertebrate Anatomy	4
BIOL 376	Animal Physiology	4
BIOL 400	Research Topics	4-5
BIOL 402	Immunology	4
BIOL 405	Bioinformatics	4
BIOL 420	Biochemistry: Proteins and Metabolism	4
BIOL 422	Biochemistry: Nucleic Acids	4
BIOL 425	Physiological Plant Ecology	4
ENVS 315	Herpetology	3
ENVS 330	Ornithology	4
	Sub-Total Credits	12

(*RI include: BIOL 324, BCHM 324, BIOL 400, BIOL 405, BIOL 425)

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Biology majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

	Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Biology BS: Animal Science Concentration

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.

Foundation and Core Courses

Take all of the following:

Course Code	Title	Credits
	BIOL 150 or BIOL 155	4
BIOL 211	Cell Biology	4
BIOL 212	Principles of Genetics	4
BIOL 213	Structure and Function of Organisms	4
BIOL 226	Biostatistics	4
BIOL 314	Community and Systems Biology	4
BIOL 390	Junior Seminar	1
BIOL 490	Senior Seminar	1
	Sub-Total Credits	26

Related Courses

Take all of the following:

Course Code	Title	Credits
CHEM 105	General Chemistry I	3
CHEM 105L	General Chemistry I Laboratory	1
CHEM 106	General Chemistry II	3
CHEM 106L	General Chemistry II Laboratory	1

CHEM 315	Organic Chemistry I	3
CHEM 315L	Laboratory-Organic Chem I	1
CHEM 316	Organic Chemistry II	3
CHEM 316L	Laboratory-Organic Chem II	1
MATH 151	Calculus I	4
	PHYS 111 or 125	4
	PHYS 112 or 126	4
	Sub-Total Credits	28

Specialization Courses

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

Course Code	Title	Credits
BIOL 300	Topics in Biology	1-4
BIOL 302	General Microbiology	4
BIOL 346	Animal Nutrition	4
BIOL 348	Animal Behavior	4
BIOL 353	Tropical Biology	4
BIOL 375	Comparative Vertebrate Anatomy	4
BIOL 376	Animal Physiology	4
ENVS 315	Herpetology	3
ENVS 330	Ornithology	4
BIOL 400	Research Topics	4-5
	Sub-Total Credits	16

(*RI include: BIOL 400)

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Biology majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Biology BS: Biological Sciences Concentration

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.

Foundation and Core Courses

Take all of the following:

Course Code	Title	Credits
	BIOL 150 or BIOL 155	4
BIOL 211	Cell Biology	4
BIOL 212	Principles of Genetics	4
BIOL 213	Structure and Function of Organisms	4
BIOL 226	Biostatistics	4
BIOL 314	Community and Systems Biology	4
BIOL 390	Junior Seminar	1
BIOL 490	Senior Seminar	1
	Sub-Total Credits	26

Related Courses

Take all of the following:

Course Code	Title	Credits
CHEM 105	General Chemistry I	3
CHEM 105L	General Chemistry I Laboratory	1
CHEM 106	General Chemistry II	3
CHEM 106L	General Chemistry II Laboratory	1
CHEM 315	Organic Chemistry I	3
CHEM 315L	Laboratory-Organic Chem I	1
CHEM 316	Organic Chemistry II	3
CHEM 316L	Laboratory-Organic Chem II	1
MATH 151	Calculus I	4
	PHYS 111 or 125	4
	PHYS 112 or 126	4
	Sub-Total Credits	28

Specialization Courses

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

Course Code	Title	Credits
BIOL 300	Topics in Biology	1-4
BIOL 302	General Microbiology	4
BIOL 306	Human Pathophysiology	4
BIOL 307	Anatomy and Physiology: Nerves Muscles Skeleton	4
BIOL 308	Anatomy and Physiology: Viscera	4
BIOL 315	Genetics and Evolution of Populations	4
BIOL 320	Toxicology	4
BIOL 322	Botany	4
BIOL 324	Phage Genomics	2
BIOL 346	Animal Nutrition	4
BIOL 348	Animal Behavior	4
BIOL 353	Tropical Biology	4
BIOL 354	Ecology	4
BIOL 357	Conservation Biology	4
BIOL 375	Comparative Vertebrate Anatomy	4
BIOL 376	Animal Physiology	4
BIOL 400	Research Topics	4-5
BIOL 402	Immunology	4
BIOL 405	Bioinformatics	4
BIOL 420	Biochemistry: Proteins and Metabolism	4
BIOL 422	Biochemistry: Nucleic Acids	4
BIOL 425	Physiological Plant Ecology	4
ATHT 392	Biomechanics	3
ATHT 393	Physiology of Exercise	3
CEMS 468	Biomedical Materials	3
ENVS 310	Ecology of the Bahamas	3
ENVS 315	Herpetology	3
ENVS 320	Advanced GIS Applications	4
ENVS 330	Ornithology	4
Sub-Total Credits		16

(*RI include: BIOL 324, BIOL 400, BIOL 425)

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Biology majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

Sub-Total Credits		40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Biology BS: Ecology and Evolution Concentration

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.

Foundation and Core Courses

Take all of the following:

Course Code	Title	Credits
	BIOL 150 or BIOL 155	4
BIOL 211	Cell Biology	4
BIOL 212	Principles of Genetics	4
BIOL 213	Structure and Function of Organisms	4
BIOL 226	Biostatistics	4
BIOL 314	Community and Systems Biology	4
BIOL 390	Junior Seminar	1
BIOL 490	Senior Seminar	1
	Sub-Total Credits	26

Related Courses

Take all of the following:

Course Code	Title	Credits
CHEM 105	General Chemistry I	3
CHEM 105L	General Chemistry I Laboratory	1
CHEM 106	General Chemistry II	3
CHEM 106L	General Chemistry II Laboratory	1

CHEM 315	Organic Chemistry I	3
CHEM 315L	Laboratory-Organic Chem I	1
CHEM 316	Organic Chemistry II	3
CHEM 316L	Laboratory-Organic Chem II	1
MATH 151	Calculus I	4
	PHYS 111 or 125	4
	PHYS 112 or 126	4
	Sub-Total Credits	28

Specialization Courses

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

Course Code	Title	Credits
BIOL 300	Topics in Biology	1-4
BIOL 302	General Microbiology	4
BIOL 315	Genetics and Evolution of Populations	4
BIOL 322	Botany	4
BIOL 324	Phage Genomics	2
BIOL 353	Tropical Biology	4
BIOL 354	Ecology	4
BIOL 357	Conservation Biology	4
BIOL 400	Research Topics	4-5
BIOL 425	Physiological Plant Ecology	4
ENVS 310	Ecology of the Bahamas	3
ENVS 315	Herpetology	3
ENVS 320	Advanced GIS Applications	4
ENVS 330	Ornithology	4
	Sub-Total Credits	16

(*RI include: BIOL 324, BIOL 400, BIOL 425)

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Biology majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Biology BS: Human Biology Concentration

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.

Foundation and Core Courses

Take all of the following:

Course Code	Title	Credits
	BIOL 150 or BIOL 155	4
BIOL 211	Cell Biology	4
BIOL 212	Principles of Genetics	4
BIOL 213	Structure and Function of Organisms	4
BIOL 226	Biostatistics	4
BIOL 314	Community and Systems Biology	4
BIOL 390	Junior Seminar	1
BIOL 490	Senior Seminar	1
	Sub-Total Credits	26

Related Courses

Take all of the following:

Course Code	Title	Credits
CHEM 105	General Chemistry I	3
CHEM 105L	General Chemistry I Laboratory	1
CHEM 106	General Chemistry II	3
CHEM 106L	General Chemistry II Laboratory	1
CHEM 315	Organic Chemistry I	3
CHEM 315L	Laboratory-Organic Chem I	1
CHEM 316	Organic Chemistry II	3
CHEM 316L	Laboratory-Organic Chem II	1
MATH 151	Calculus I	4
	PHYS 111 or 125	4
	PHYS 112 or 126	4

	Sub-Total Credits	28
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Specialization Courses:

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

Course Code	Title	Credits
BIOL 300	Topics in Biology	1-4
BIOL 302	General Microbiology	4
BIOL 306	Human Pathophysiology	4
BIOL 307	Anatomy and Physiology: Nerves Muscles Skeleton	4
BIOL 308	Anatomy and Physiology: Viscera	4
BIOL 320	Toxicology	4
BIOL 324	Phage Genomics	2
BIOL 402	Immunology	4
BIOL 420	Biochemistry: Proteins and Metabolism	4
BIOL 422	Biochemistry: Nucleic Acids	4
BIOL 400	Research Topics	4-5
ATHT 392	Biomechanics	3
ATHT 393	Physiology of Exercise	3
CEMS 468	Biomedical Materials	3
	Sub-Total Credits	16

(*RI include: BIOL 324, BIOL 400)

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Biology majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

	Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Biology BS: Molecular Biology Concentration

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.

Foundation and Core Courses

Take all of the following:

Course Code	Title	Credits
	BIOL 150 or BIOL 155	4
BIOL 211	Cell Biology	4
BIOL 212	Principles of Genetics	4
BIOL 213	Structure and Function of Organisms	4
BIOL 226	Biostatistics	4
BIOL 314	Community and Systems Biology	4
BIOL 390	Junior Seminar	1
BIOL 490	Senior Seminar	1
	Sub-Total Credits	26

Related Courses

Take all of the following:

Course Code	Title	Credits
CHEM 105	General Chemistry I	3
CHEM 105L	General Chemistry I Laboratory	1
CHEM 106	General Chemistry II	3
CHEM 106L	General Chemistry II Laboratory	1
CHEM 315	Organic Chemistry I	3
CHEM 315L	Laboratory-Organic Chem I	1
CHEM 316	Organic Chemistry II	3
CHEM 316L	Laboratory-Organic Chem II	1
MATH 151	Calculus I	4
	PHYS 111 or 125	4
	PHYS 112 or 126	4
	Sub-Total Credits	28

Specialization Courses

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

Course Code	Title	Credits
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BIOL 300	Topics in Biology	1-4
BIOL 302	General Microbiology	4
BIOL 306	Human Pathophysiology	4
BIOL 320	Toxicology	4
BIOL 324	Phage Genomics	2
BIOL 402	Immunology	4
BIOL 405	Bioinformatics	4
BIOL 420	Biochemistry: Proteins and Metabolism	4
BIOL 422	Biochemistry: Nucleic Acids	4
BIOL 400	Research Topics	4-5
Sub-Total Credits		16

(*RI include: BIOL 324, BIOL 400)

CLAS General Education Requirements

Complete remaining CLAS General Education requirements. Biology majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Total Credits	124
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Biology BS: Plant Biology Concentration

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.

Foundation and Core Courses

Take all of the following:

Course Code	Title	Credits
	BIOL 150 or BIOL 155	4
BIOL 211	Cell Biology	4
BIOL 212	Principles of Genetics	4
BIOL 213	Structure and Function of Organisms	4
BIOL 226	Biostatistics	4
BIOL 314	Community and Systems Biology	4
BIOL 390	Junior Seminar	1
BIOL 490	Senior Seminar	1
	Sub-Total Credits	26

Related Courses

Take all of the following:

Course Code	Title	Credits
CHEM 105	General Chemistry I	3
CHEM 105L	General Chemistry I Laboratory	1
CHEM 106	General Chemistry II	3
CHEM 106L	General Chemistry II Laboratory	1
CHEM 315	Organic Chemistry I	3
CHEM 315L	Laboratory-Organic Chem I	1
CHEM 316	Organic Chemistry II	3
CHEM 316L	Laboratory-Organic Chem II	1
MATH 151	Calculus I	4
	PHYS 111 or 125	4
	PHYS 112 or 126	4
	Sub-Total Credits	28

Specialization Courses

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

Course Code	Title	Credits
BIOL 300	Topics in Biology	1-4
BIOL 302	General Microbiology	4
BIOL 322	Botany	4
BIOL 420	Biochemistry: Proteins and Metabolism	4
BIOL 422	Biochemistry: Nucleic Acids	4
BIOL 400	Research Topics	4-5
BIOL 425	Physiological Plant Ecology	4
	BIOL 300- or 400-level course	4
	Sub-Total Credits	16

(*RI include: BIOL 400)

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Biology majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

	Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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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.

Foundation and Core Courses

Take all of the following Core Courses:

Course Code	Title	Credits
	BIOL 150 or BIOL 155	4
BIOL 211	Cell Biology	4
BIOL 212	Principles of Genetics	4
BIOL 213	Structure and Function of Organisms	4
BIOL 226	Biostatistics	4
BIOL 314	Community and Systems Biology	4
BIOL 390	Junior Seminar	1
BIOL 490	Senior Seminar	1
	Sub-Total Credits	26

Related Courses

Take all courses:

Course Code	Title	Credits
CHEM 105	General Chemistry I	3
CHEM 105L	General Chemistry I Laboratory	1
CHEM 106	General Chemistry II	3
CHEM 106L	General Chemistry II Laboratory	1
	A 300-level Chemistry course	3-4
	Sub-Total Credits	11-12

Specialization Courses

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

Course Code	Title	Credits
BIOL 300	Topics in Biology	1-4
BIOL 302	General Microbiology	4
BIOL 306	Human Pathophysiology	4
BIOL 307	Anatomy and Physiology: Nerves Muscles Skeleton	4
BIOL 308	Anatomy and Physiology: Viscera	4
BIOL 315	Genetics and Evolution of Populations	4
BIOL 320	Toxicology	4
BIOL 322	Botany	4
BIOL 324	Phage Genomics	2
BIOL 346	Animal Nutrition	4
BIOL 348	Animal Behavior	4
BIOL 353	Tropical Biology	4
BIOL 354	Ecology	4
BIOL 357	Conservation Biology	4
BIOL 375	Comparative Vertebrate Anatomy	4
BIOL 376	Animal Physiology	4
BIOL 400	Research Topics	4-5
BIOL 402	Immunology	4
BIOL 405	Bioinformatics	4
BIOL 420	Biochemistry: Proteins and Metabolism	4
BIOL 422	Biochemistry: Nucleic Acids	4
BIOL 425	Physiological Plant Ecology	4
ENVS 315	Herpetology	3
ENVS 330	Ornithology	4
	Sub-Total Credits	12

(*RI include: BIOL 324, BIOL 400, BIOL 405, BIOL 425)

	Total Credits	49-50
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Biology 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.

Requirements for the Biology minor

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

Take one of the following:

Course Code	Title	Credits
BIOL 150	Biological Foundations	4
BIOL 155	Biological Foundations: Research Project	4
Sub-Total Credits		4

Take CHEM 105/105L:

Course Code	Title	Credits
CHEM 105	General Chemistry I	3
CHEM 105L	General Chemistry I Laboratory	1
Sub-Total Credits		4

Complete 16 additional credits of BIOL courses

Biology minors may select elective courses from any course with a BIOL subject code, excluding BIOL 226, 390, 450, 485, and 490. Electives should be selected in consultation with a Biology advisor.

Sub-Total Credits		16
Total Credits		24

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.

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 BA

Requirements for the Major

Course Code	Title	Credits
CHEM 105	General Chemistry I	3
CHEM 106	General Chemistry II	3
CHEM 105L	General Chemistry I Laboratory	1
CHEM 106L	General Chemistry II Laboratory	1
CHEM 315	Organic Chemistry I	3
CHEM 316	Organic Chemistry II	3
CHEM 315L	Laboratory-Organic Chem I	1
CHEM 316L	Laboratory-Organic Chem II	1
CHEM 321	Introduction to Analytical Chemistry	4
CHEM 340	PCHEM: Quantum & Spectroscopy	3
CHEM 341	Physical Chemistry Laboratory	1
CHEM 342	PCHEM: Thermo & kinetics	4
CHEM 372	Inorganic Chemistry	3
CHEM 374	Inorganic Chemistry Laboratory	1
CHEM 423	Instrumental Analysis	3
CHEM 465	Advanced Lab I	1
CHEM 466	Advanced Lab II	1
CHEM 490	Chemistry Seminar	1
Sub-Total Credits		38

Related study required for the major

Course Code	Title	Credits
MATH 151	Calculus I	4
MATH 152	Calculus II	4
	PHYS 111 or 125	4
	PHYS 112 or 126	4
	Sub-Total Credits	16

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.

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Chemistry majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

	Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Chemistry BS

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)

Requirements for the Major

Course Code	Title	Credits
CHEM 105	General Chemistry I	3

CHEM 106	General Chemistry II	3
CHEM 105L	General Chemistry I Laboratory	1
CHEM 106L	General Chemistry II Laboratory	1
CHEM 315	Organic Chemistry I	3
CHEM 316	Organic Chemistry II	3
CHEM 315L	Laboratory-Organic Chem I	1
CHEM 316L	Laboratory-Organic Chem II	1
CHEM 321	Introduction to Analytical Chemistry	4
CHEM 340	PCHEM: Quantum & Spectroscopy	3
CHEM 341	Physical Chemistry Laboratory	1
CHEM 342	PCHEM: Thermo & kinetics	4
CHEM 372	Inorganic Chemistry	3
CHEM 374	Inorganic Chemistry Laboratory	1
CHEM 423	Instrumental Analysis	3
CHEM 465	Advanced Lab I	1
CHEM 466	Advanced Lab II	1
CHEM 490	Chemistry Seminar	1
Sub-Total Credits		38

Related study required for the major

Course Code	Title	Credits
MATH 151	Calculus I	4
MATH 152	Calculus II	4
	PHYS 111 or 125	4
	PHYS 112 or 126	4
Sub-Total Credits		16

Upper Level Courses in Science, Engineering or Math

(At least 10 credits required, at least 2 classes in 1 field)

Course Code	Title	Credits
BIOL 211	Cell Biology	4
BIOL 212	Principles of Genetics	4
BIOL 302	General Microbiology	4
BIOL 307	Anatomy and Physiology: Nerves Muscles Skeleton	4
BIOL 308	Anatomy and Physiology: Viscera	4
BIOL 420	Biochemistry: Proteins and Metabolism	4
CEMS 214	Structure and Properties of Materials	3
CEMS 216	Bonding and Structure of Materials	3
CEMS 314	Ceramic Processing Principles	3
CEMS 322	Introduction to Glass Science	3

CEMS 347	Spectroscopy	2
ENVS 240	Environmental Research Procedures I	3
ENVS 241	Environmental Research Procedures II	3
ENVS 351	Environmental Biogeochemistry	4
GEOL 201	Surficial Geology	4
GEOL 301	Structural Geology	4
GEOL 302	Mineralogy and Petrology	4
GEOL 307	Stratigraphy and Sedimentation	4
MATH 253	Calculus III	4
MATH 271	Differential Equations	3
MATH 371	Linear Algebra	4
MECH 320	Thermodynamics I	3
MECH 321	Thermodynamics II	3
PHYS 326	Elementary Modern Physics	3
PHYS 401	Quantum Mechanics I	3
PHYS 402	Quantum Mechanics II	3
Sub-Total Credits		10

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Chemistry majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Total Credits	124
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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.

A double major is available in Chemistry for any Alfred University undergraduate completing a separate degree program.

Core Courses

Course Code	Title	Credits
CHEM 105	General Chemistry I	3
CHEM 106	General Chemistry II	3
CHEM 105L	General Chemistry I Laboratory	1
CHEM 106L	General Chemistry II Laboratory	1
CHEM 315	Organic Chemistry I	3
CHEM 316	Organic Chemistry II	3
CHEM 315L	Laboratory-Organic Chem I	1
CHEM 316L	Laboratory-Organic Chem II	1
	CHEM 321 or CHEM 340	3-4
	CHEM 342 or (CEMS 214 and CEMS 235 and CEMS 344)	4-11
CHEM 341	Physical Chemistry Laboratory	1
CHEM 372	Inorganic Chemistry	3
CHEM 374	Inorganic Chemistry Laboratory	1
	CHEM 423 or (CEMS 347 and CEMS 349)	3-4
CHEM 465	Advanced Lab I	1
CHEM 466	Advanced Lab II	1
CHEM 490	Chemistry Seminar	1
	Sub-Total Credits	34-43

Related Courses

Course Code	Title	Credits
MATH 151	Calculus I	4
MATH 152	Calculus II	4
	PHYS 111 or 125	4
	PHYS 112 or 126	4
	Sub-Total Credits	16

	Total Credits	50-59
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Chemistry 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.

Required

Course Code	Title	Credits
CHEM 105	General Chemistry I	3
CHEM 106	General Chemistry II	3
Sub-Total Credits		6

Plus at least 12 additional credits from the following:

Course Code	Title	Credits
	CHEM 310 or CHEM 315	3
CHEM 316	Organic Chemistry II	3
CHEM 321	Introduction to Analytical Chemistry	4
CHEM 340	PCHEM: Quantum & Spectroscopy	3
CHEM 341	Physical Chemistry Laboratory	1
CHEM 342	PCHEM: Thermo & kinetics	4
CHEM 372	Inorganic Chemistry	3
CHEM 370	Chemistry Projects	1-2
CHEM 374	Inorganic Chemistry Laboratory	1
CHEM 400	Advanced Chemistry Topics	1-4
CHEM 423	Instrumental Analysis	3
	CHEM/BIOL 420	4
Sub-Total Credits		12

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](#)

	Total Credits	18
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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.

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.

Communication Studies BA

Core Requirements

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:

Course Code	Title	Credits
COMM 101	Introduction to Communication Studies	4
COMM 110	Mass Media and American Life	4
COMM 205	Introduction to News and Media	4
COMM 301	Broadcasters Advertisers and Audiences	4
COMM 309	Persuasion: Reception and Responsibility	4
COMM 410	Communication Ethics	4
Sub-Total Credits		24

Additional Elective 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.

	Sub-Total Credits	20
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CLAS General Education Requirements

Complete the [CLAS General Education](#) requirements. Communication studies majors may complete some general education credits as part of their degree program, depending on elective course selection.

	Sub-Total Credits	52
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Communication Studies Double Major

Core Requirements

All courses used to complete the double major must have grades of "C" or better. All students must complete a 24-credit hour core consisting of the following courses:

Course Code	Title	Credits
COMM 101	Introduction to Communication Studies	4
COMM 110	Mass Media and American Life	4
COMM 205	Introduction to News and Media	4
COMM 301	Broadcasters Advertisers and Audiences	4
COMM 309	Persuasion: Reception and Responsibility	4
COMM 410	Communication Ethics	4
	Sub-Total Credits	24

Additional Elective 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.

	Sub-Total Credits	20
	Total Credits	44

Communication Studies 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.

Requirements For The Minor

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

Course Code	Title	Credits
COMM 101	Introduction to Communication Studies	4
COMM 110	Mass Media and American Life	4
COMM 205	Introduction to News and Media	4
COMM 301	Broadcasters Advertisers and Audiences	4
COMM 309	Persuasion: Reception and Responsibility	4
COMM 410	Communication Ethics	4
	Sub-Total Credits	24
	Total Credits	24

Film Studies 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.

Requirements For The Minor

Course Code	Title	Credits
COMM 215	Introduction to Film Studies	4
COMM 304	History of the Motion Picture	4
	Sub-Total Credits	8

Select 12 credits of electives

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

Course Code	Title	Credits
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ARTH 373	Materiality in Experimental Film and Video Art	4
COMM 216	Video Production	4
COMM 300	Special Topics	1-4
COMM 400	Special Topics	1-4
COMM 426	Screenwriting	4
ENGL 225	Shakespeare and Cinema	2-4
MUSC 214	Reel Music in America	4
Sub-Total Credits		12

Special Topics courses (COMM 300 / COMM 400) may apply to the minor with permission. 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 Credits	20
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Education

Early Childhood Education BS

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).

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.

Continuing Enrollment Requirements

Students may establish their major in Education upon admission to the College of Liberal Arts and Sciences. Prerequisite courses should be completed during the first and second years at Alfred. 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.

Prerequisite Courses

Course Code	Title	Credits
EDUC 230	Psychological Foundations of Education	3
EDUC 231	Social Foundations of Education	3
SPED 456	Human Development: Exceptionality	3
MATH 102	Mathematics for Teachers: Grades K-6	4
Sub-Total Credits		13

Core Courses

Spring Semester - Junior Year

Course Code	Title	Credits
EDUC 374	Integrated Methods: Social Studies Science Mathematics and Computer Application	6
EDUC 375	Early Childhood/Childhood Practicum	3
EDUC 471	Methods of Teaching Literacy	6
EDUC 474	Orientation and Assessment in the Early Childhood/Childhood Classroom	3
Sub-Total Credits		18

Fall Semester - Senior Year

Course Code	Title	Credits
EDUC 461	Student Teaching for Early Childhood/Childhood Certification	12
EDUC 472	Competency Skills in Teaching Literacy	3
Sub-Total Credits		15

Requirements for 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.

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Elementary Education majors complete 4 credits of quantitative reasoning as part of their degree program.

Sub-Total Credits		48
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Education Minor

- **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 & 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.

Students seeking certification in Business And Marketing (Pre K - 12th Grade) requires completion of the appropriate academic major in the College of Business.

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

Course Code	Title	Credits
EDUC 230	Psychological Foundations of Education	3
EDUC 231	Social Foundations of Education	3
SPED 456	Human Development: Exceptionality	3
Sub-Total Credits		9

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 [EDUC 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.

Pedagogical Core: Adolescent and Business Education

Students seeking certification in Adolescent Education (Grades 7-12) or in Special Subjects: Business and Marketing (Pre K - 12th Grade) should complete this pedagogical core.

Course Code	Title	Credits
EDUC 345	Education Fieldwork	3
EDUC 405	Literacy in the Content Area	3
EDUC 413	Using Literature in Intermediate and Adolescent Classrooms	3
EDUC 460	Seminar in Teaching and Professional Development	3
EDUC 462	Student Teaching for Middle/Adolescent Certification	12
EDUC 489	Current Teaching Methods: Adolescent Subjects	3
SPED 456	Human Development: Exceptionality	3
Sub-Total Credits		30

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.

Pedagogical Core: Visual Arts

Students seeking certification in Special Subjects: Visual Arts should complete this pedagogical core.

Course Code	Title	Credits
EDUC 345	Education Fieldwork	3
EDUC 405	Literacy in the Content Area	3
EDUC 464	Seminar in Professional Development: Visual Arts	3
EDUC 463	Student Teaching-Art Education	12
EDUC 491	Methods and Curriculum in Art Education	3
SPED 456	Human Development: Exceptionality	3
Sub-Total Credits		27

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 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. Through close reading of texts and engaging class discussions, we invite you, in Thoreau's words, to "live deliberately."

The mission of the Division of English is to offer instruction in canonical and non-canonical British and American Literature, integrating these studies with creative writing courses in poetry, fiction, nonfiction and playwriting. We are 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 to read with greater purpose and attention and to write with greater clarity, insight, and humanity.

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.

We encourage students to assume responsibility for the direction of their education by developing a course of study based on their goals. 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. Articulate in discussion and on paper how texts communicate more than their surface-level meanings
2. Identify dominant themes and concerns in the literature

- 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.

English BA

Requirements for the English Major

Course Code	Title	Credits
One 200-level literature class		4
ENGL 325	Survey of British Literature I	3
ENGL 326	Survey of British Literature II	3
ENGL 327	Survey of American Literature	4
ENGL 328	The Language of Literary Art	4
400-level coursework in writing and literature		28
Sub-Total Credits		46

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.

CLAS General Education Requirements

Complete remaining [CLAS General Education Requirements](#). English majors complete 4 credits of literature requirements as part of their degree program.

Sub-Total Credits	48
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Total Credits	124
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English Double Major

Requirements for the English Major

Course Code	Title	Credits
One 200-level literature class		4
ENGL 325	Survey of British Literature I	3
ENGL 326	Survey of British Literature II	3
ENGL 327	Survey of American Literature	4
ENGL 328	The Language of Literary Art	4
400-level coursework in writing and literature		28
Sub-Total Credits		46

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 Credits	46
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English Minor

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.

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.

Core Courses

Complete one of the following:

Course Code	Title	Credits
ENGL 325 and ENGL 326 Surveys of British Literature I & II		6
ENGL 327	Survey of American Literature	4
ENGL 328	The Language of Literary Art	4
Sub-Total Credits		4-6

Elective courses

Complete the following:

Course Code	Title	Credits
Any 200-level writing or literature course in English		4
400-level coursework in writing and/or literature		10-12
Sub-Total Credits		14-16

	Total Credits	20
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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.

Requirements for a Minor in Literature

Course Code	Title	Credits
	One 200-level literature class	4
	ENGL 325 and 326 or 327	4-6
	400-level coursework in writing and/or literature	10-12
	Sub-Total Credits	18-22

Note: ENGL 450-Independent Study does not count toward the Literature minor

	Total Credits	20
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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.

Requirements for a Minor in Writing

Course Code	Title	Credits
	One 200-level creative writing class	4
ENGL 328	The Language of Literary Art	4
	400-level writing courses	12
	Sub-Total Credits	20

	Total Credits	20
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Environmental Studies/Geology

Environmental Studies Overview

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.

Geology Overview

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.

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.

Environment and Society Double Major

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.

Requirements for Environmental Science: Social Science Emphasis

Core requirements

Course Code	Title	Credits
ENVS 101	Environmental Studies I - Natural Science	4
	ENVS 205, POLS/SOCI 230, PSYC 221, or BUSI 113	4
ENVS 205	Environmental Data Analysis	4
POLS 230	Introduction to Data Analysis and Statistics	4
SOCI 230	Introduction to Data Analysis and Statistics	4
PSYC 221	Psychological Research Methods and Statistics I	4
BUSI 113	Descriptive Analytics & Statistics	3
ENVS 206	Fieldcraft-Outdoor Proficiency	4
ENVS 214	Environment Politics and Society	4
ENVS 220	Introduction to Geographic Information Systems	4
ENVS 240	Environmental Research Procedures I	3
ENVS 241	Environmental Research Procedures II	3
ENVS 360	Junior Seminar	1
ENVS 415	Natural Resources Management	3
ENVS 440	Environmental Research Planning	2
ENVS 490	Senior Seminar	2
ENVS 499	Senior Project in Environmental Studies	2-4
	Sub-Total Credits	36-38

Breadth requirements

One course from among the following:

Course Code	Title	Credits
BIOL 150	Biological Foundations	4
	CHEM 105 and 105L	4
GEOL 101	This Dynamic Earth	4
	PHYS 111 or 125	4
	Sub-Total Credits	4

Social Science emphasis electives

16 credits from among the following:

Course Code	Title	Credits
ANTH 110	Cultural Anthropology	4
ECON 201	Principles of Microeconomics	3

ECON 202	Principles of Macroeconomics	3
ENGL 293	Writers Gone Wild: Literature and the Environment	4
ENVS 320	Advanced GIS Applications	4
PHIL 281	Ethics	4
POLS 313	State and Local Politics	4
POLS 411	Bureaucracy	4
PSYC 282	Social Psychology	4
	Sub-Total Credits	16

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

	Total Credits	56-58
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Environmental Studies (Environmental Science) Double Major

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.

Requirements for Environmental Science: Environmental Science Emphasis

Core requirements

Course Code	Title	Credits
ENVS 101	Environmental Studies I - Natural Science	4
	ENVS 205, POLS/SOCI 230, PSYC 221, or BUSI 113	4
ENVS 205	Environmental Data Analysis	4
POLS 230	Introduction to Data Analysis and Statistics	4
SOCI 230	Introduction to Data Analysis and Statistics	4
PSYC 221	Psychological Research Methods and Statistics I	4
BUSI 113	Descriptive Analytics & Statistics	3
ENVS 206	Fieldcraft-Outdoor Proficiency	4
ENVS 214	Environment Politics and Society	4
ENVS 220	Introduction to Geographic Information Systems	4
ENVS 240	Environmental Research Procedures I	3
ENVS 241	Environmental Research Procedures II	3
ENVS 360	Junior Seminar	1
ENVS 440	Environmental Research Planning	2
ENVS 490	Senior Seminar	2
ENVS 499	Senior Project in Environmental Studies	2-4
MATH 151	Calculus I	4

	Sub-Total Credits	37-39
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Breadth requirement

Four courses from the following:

Course Code	Title	Credits
BIOL 150	Biological Foundations	4
	CHEM 105 and 105L	4
	CHEM 106 and 106L	4
GEOL 101	This Dynamic Earth	4
MATH 152	Calculus II	4
	PHYS 111 or 125	4
	PHYS 112 or 126	4
	Sub-Total Credits	16

Depth requirements

Three Courses (totaling at least 11 credit hours) from the following:

Course Code	Title	Credits
BIOL 322	Botany	4
BIOL 354	Ecology	4
	CHEM 310 or (CHEM 315 and 315L)	4
CHEM 321	Introduction to Analytical Chemistry	4
ENVS 300	Special Topics	1-4
ENVS 310	Ecology of the Bahamas	3
ENVS 315	Herpetology	3
ENVS 320	Advanced GIS Applications	4
ENVS 330	Ornithology	4
ENVS 351	Environmental Biogeochemistry	4
ENVS 357	Conservation Biology	4
GEOL 201	Surficial Geology	4
GEOL 231	Climate Change Mechanics	4
GEOL 464	Hydrogeology	4
	Sub-Total Credits	11

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

	Total Credits	64-66
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Environmental Studies (Natural Science) Double Major

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.

Requirements for Environmental Science: Natural Science Emphasis

Core Requirements

Course Code	Title	Credits
ENVS 101	Environmental Studies I - Natural Science	4
	ENVS 205, POLS/SOCI 230, PSYC 221, or BUSI 113	4
ENVS 205	Environmental Data Analysis	4
POLS 230	Introduction to Data Analysis and Statistics	4
SOCI 230	Introduction to Data Analysis and Statistics	4
PSYC 221	Psychological Research Methods and Statistics I	4
BUSI 113	Descriptive Analytics & Statistics	3
ENVS 206	Fieldcraft-Outdoor Proficiency	4
ENVS 214	Environment Politics and Society	4
ENVS 220	Introduction to Geographic Information Systems	4
ENVS 240	Environmental Research Procedures I	3
ENVS 241	Environmental Research Procedures II	3
ENVS 360	Junior Seminar	1
ENVS 415	Natural Resources Management	3
ENVS 440	Environmental Research Planning	2
ENVS 490	Senior Seminar	2
ENVS 499	Senior Project in Environmental Studies	2-4
	Sub-Total Credits	36-38

Breadth I. Requirement

One course from among the following:

Course Code	Title	Credits
BIOL 150	Biological Foundations	4
	CHEM 105 and 105L	4
GEOL 101	This Dynamic Earth	4
PHYS 111	Introductory General Physics I	4
PHYS 125	Physics I	4
	Sub-Total Credits	4

Breadth II. Requirement

Two courses from among the following:

Course Code	Title	Credits
ANTH 110	Cultural Anthropology	4
ECON 201	Principles of Microeconomics	3
ENGL 293	Writers Gone Wild: Literature and the Environment	4
PHIL 281	Ethics	4
POLS 411	Bureaucracy	4
Sub-Total Credits		8

Natural Science emphasis electives

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

Course Code	Title	Credits
BIOL 322	Botany	4
BIOL 354	Ecology	4
	CHEM 106 and 106L	4
	CHEM 310 or (CHEM 315 and 315L)	4
	CHEM 316 and 316L	4
CHEM 321	Introduction to Analytical Chemistry	4
ENVS 300	Special Topics	1-4
ENVS 310	Ecology of the Bahamas	3
ENVS 315	Herpetology	3
ENVS 320	Advanced GIS Applications	4
ENVS 330	Ornithology	4
ENVS 351	Environmental Biogeochemistry	4
ENVS 357	Conservation Biology	4
GEOL 201	Surficial Geology	4
GEOL 231	Climate Change Mechanics	4
GEOL 301	Structural Geology	4
GEOL 307	Stratigraphy and Sedimentation	4
GEOL 464	Hydrogeology	4
	PHYS 112 or 126	4
Sub-Total Credits		11

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

	Total Credits	59-61
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Environmental Studies BA: Environmental Science Emphasis

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.

Requirements for Environmental Science: Environmental Science Emphasis

Core requirements

Course Code	Title	Credits
ENVS 101	Environmental Studies I - Natural Science	4
	ENVS 205, POLS/SOCI 230, PSYC 221, or BUSI 113	4
ENVS 205	Environmental Data Analysis	4
POLS 230	Introduction to Data Analysis and Statistics	4
SOCI 230	Introduction to Data Analysis and Statistics	4
PSYC 221	Psychological Research Methods and Statistics I	4
BUSI 113	Descriptive Analytics & Statistics	3
ENVS 206	Fieldcraft-Outdoor Proficiency	4
ENVS 214	Environment Politics and Society	4
ENVS 220	Introduction to Geographic Information Systems	4
ENVS 240	Environmental Research Procedures I	3
ENVS 241	Environmental Research Procedures II	3
ENVS 360	Junior Seminar	1
ENVS 440	Environmental Research Planning	2
ENVS 490	Senior Seminar	2
ENVS 499	Senior Project in Environmental Studies	2-4
MATH 151	Calculus I	4
	Sub-Total Credits	37-39

Breadth requirement

Four courses from the following:

Course Code	Title	Credits
BIOL 150	Biological Foundations	4
	CHEM 105 and 105L	4
	CHEM 106 and 106L	4
GEOL 101	This Dynamic Earth	4
MATH 152	Calculus II	4
	PHYS 111 or 125	4
	PHYS 112 or 126	4

	Sub-Total Credits	16
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Depth requirements

Three Courses (totaling at least 11 credit hours) from the following:

Course Code	Title	Credits
BIOL 322	Botany	4
BIOL 354	Ecology	4
	CHEM 310 or (CHEM 315 and 315L)	4
CHEM 321	Introduction to Analytical Chemistry	4
ENVS 300	Special Topics	1-4
ENVS 310	Ecology of the Bahamas	3
ENVS 315	Herpetology	3
ENVS 320	Advanced GIS Applications	4
ENVS 330	Ornithology	4
ENVS 351	Environmental Biogeochemistry	4
ENVS 357	Conservation Biology	4
GEOL 201	Surficial Geology	4
GEOL 231	Climate Change Mechanics	4
GEOL 464	Hydrogeology	4
	Sub-Total Credits	11

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

CLAS General Education Requirements

Complete remaining [CLAS General Education Requirements](#). ENVS Environmental Science majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

	Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Environmental Studies BA: Natural Science Emphasis

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.

Requirements for Environmental Science: Natural Science Emphasis

Core Requirements

Course Code	Title	Credits
ENVS 101	Environmental Studies I - Natural Science	4
	ENVS 205, POLS/SOCI 230, PSYC 221, or BUSI 113	4
ENVS 205	Environmental Data Analysis	4
POLS 230	Introduction to Data Analysis and Statistics	4
SOCI 230	Introduction to Data Analysis and Statistics	4
PSYC 221	Psychological Research Methods and Statistics I	4
BUSI 113	Descriptive Analytics & Statistics	3
ENVS 206	Fieldcraft-Outdoor Proficiency	4
ENVS 214	Environment Politics and Society	4
ENVS 220	Introduction to Geographic Information Systems	4
ENVS 240	Environmental Research Procedures I	3
ENVS 241	Environmental Research Procedures II	3
ENVS 360	Junior Seminar	1
ENVS 415	Natural Resources Management	3
ENVS 440	Environmental Research Planning	2
ENVS 490	Senior Seminar	2
ENVS 499	Senior Project in Environmental Studies	2-4
	Sub-Total Credits	36-38

Breadth I. Requirement

One course from among the following:

Course Code	Title	Credits
BIOL 150	Biological Foundations	4
	CHEM 105 and 105L	4
GEOL 101	This Dynamic Earth	4
PHYS 111	Introductory General Physics I	4
PHYS 125	Physics I	4

	Sub-Total Credits	4
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Breadth II. Requirement

Two courses from among the following:

Course Code	Title	Credits
ANTH 110	Cultural Anthropology	4
ECON 201	Principles of Microeconomics	3
ENGL 293	Writers Gone Wild: Literature and the Environment	4
PHIL 281	Ethics	4
POLS 411	Bureaucracy	4
	Sub-Total Credits	8

Natural Science emphasis electives

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

Course Code	Title	Credits
BIOL 322	Botany	4
BIOL 354	Ecology	4
	CHEM 106 and 106L	4
	CHEM 310 or (CHEM 315 and 315L)	4
	CHEM 316 and 316L	4
CHEM 321	Introduction to Analytical Chemistry	4
ENVS 300	Special Topics	1-4
ENVS 310	Ecology of the Bahamas	3
ENVS 315	Herpetology	3
ENVS 320	Advanced GIS Applications	4
ENVS 330	Ornithology	4
ENVS 351	Environmental Biogeochemistry	4
ENVS 357	Conservation Biology	4
GEOL 201	Surficial Geology	4
GEOL 231	Climate Change Mechanics	4
GEOL 301	Structural Geology	4
GEOL 307	Stratigraphy and Sedimentation	4
GEOL 464	Hydrogeology	4
	PHYS 112 or 126	4
	Sub-Total Credits	11

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

CLAS General Education Requirements

Complete remaining [CLAS General Education Requirements](#). ENVS Natural Science Emphasis majors complete 16-20 credits of CLAS general education credits as part of their degree program.

	Sub-Total Credits	32-36
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Environmental Studies BA: Social Science Emphasis

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.

Requirements for Environmental Science: Social Science Emphasis

Core requirements

Course Code	Title	Credits
ENVS 101	Environmental Studies I - Natural Science	4
	ENVS 205, POLS/SOCI 230, PSYC 221, or BUSI 113	4
ENVS 205	Environmental Data Analysis	4
POLS 230	Introduction to Data Analysis and Statistics	4
SOCI 230	Introduction to Data Analysis and Statistics	4
PSYC 221	Psychological Research Methods and Statistics I	4
BUSI 113	Descriptive Analytics & Statistics	3
ENVS 206	Fieldcraft-Outdoor Proficiency	4
ENVS 214	Environment Politics and Society	4
ENVS 220	Introduction to Geographic Information Systems	4
ENVS 240	Environmental Research Procedures I	3
ENVS 241	Environmental Research Procedures II	3
ENVS 360	Junior Seminar	1

ENVS 415	Natural Resources Management	3
ENVS 440	Environmental Research Planning	2
ENVS 490	Senior Seminar	2
ENVS 499	Senior Project in Environmental Studies	2-4
Sub-Total Credits		36-38

Breadth requirements

One course from among the following:

Course Code	Title	Credits
BIOL 150	Biological Foundations	4
	CHEM 105 and 105L	4
GEOL 101	This Dynamic Earth	4
	PHYS 111 or 125	4
Sub-Total Credits		4

Social Science emphasis electives

16 credits from among the following:

Course Code	Title	Credits
ANTH 110	Cultural Anthropology	4
ECON 201	Principles of Microeconomics	3
ECON 202	Principles of Macroeconomics	3
ENGL 293	Writers Gone Wild: Literature and the Environment	4
ENVS 320	Advanced GIS Applications	4
PHIL 281	Ethics	4
POLS 313	State and Local Politics	4
POLS 411	Bureaucracy	4
PSYC 282	Social Psychology	4
Sub-Total Credits		16

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

CLAS General Education Requirements

Complete remaining [CLAS General Education Requirements](#). ENVS Social Science emphasis majors complete 12-28 credits of CLAS general education credits as part of their degree program.

Sub-Total Credits		24-44
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Environmental Studies 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.

Requirements for the Environmental Studies minor

Course Code	Title	Credits
ENVS 101	Environmental Studies I - Natural Science	4
ENVS 214	Environment Politics and Society	4
ENVS 240	Environmental Research Procedures I	3
ENVS 241	Environmental Research Procedures II	3
	Natural science and social science electives	8

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.

	Sub-Total Credits	22
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	Total Credits	22
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Geology BA: Earth Science Education Track

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

Geology Core

Take one introductory course and all four additional courses.

Course Code	Title	Credits
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	Introductory course: GEOL 101, 103, 104, or 106	4
GEOL 201	Surficial Geology	4
GEOL 301	Structural Geology	4
GEOL 302	Mineralogy and Petrology	4
	GEOL 464 or ENVS 351	4
	Sub-Total Credits	20

Earth Science Education Track Electives

Take all from this section

Course Code	Title	Credits
MATH 102	Mathematics for Teachers: Grades K-6	4
GEOL 206	Fieldcraft-Outdoor Proficiency	4
	Sub-Total Credits	8

GEOL 206: 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:

Course Code	Title	Credits
ASTR 103	Introductory Astronomy	4
ASTR 107	Elementary Astronomy Lab	2
ENVS 220	Introduction to Geographic Information Systems	4
ENVS 320	Advanced GIS Applications	4
ENVS 351	Environmental Biogeochemistry	4
GEOL 231	Climate Change Mechanics	4
GEOL 307	Stratigraphy and Sedimentation	4
GEOL 408	Tectonics	4
GEOL 464	Hydrogeology	4
SCIE 110	Weather Elements	2
	Sub-Total Credits	8

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

CLAS General Education Requirements

Complete remaining [CLAS General Education Requirements](#). Gology Earth Science Education track majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

	Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Geology BA: General Geology Track

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

Geology Core

Take one introductory course and the four remaining courses in this section.

Course Code	Title	Credits
	Introductory course: GEOL 101, 103, 104, or 106	4
GEOL 201	Surficial Geology	4
GEOL 301	Structural Geology	4
GEOL 302	Mineralogy and Petrology	4
	GEOL 464 or ENVS 351	4
	Sub-Total Credits	20

General Geology Track:

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

Course Code	Title	Credits
ENVS 205	Environmental Data Analysis	4
GEOL 206	Fieldcraft-Outdoor Proficiency	4
ENVS 220	Introduction to Geographic Information Systems	4
	Sub-Total Credits	12

and 8 credits selected from the following:

Course Code	Title	Credits
ENVS 320	Advanced GIS Applications	4
ENVS 351	Environmental Biogeochemistry	4
GEOL 231	Climate Change Mechanics	4
GEOL 307	Stratigraphy and Sedimentation	4
GEOL 408	Tectonics	4
GEOL 464	Hydrogeology	4
Sub-Total Credits		8

CLAS General Education Requirements

Complete remaining [CLAS General Education Requirements](#). General track Geology majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Total Credits	124
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Geology BA: Planetary Science Track

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

Geology Core

Take one introductory course and the remaining four courses:

Course Code	Title	Credits
	Introductory course: GEOL 101, 103, 104, or 106	4

GEOL 201	Surficial Geology	4
GEOL 301	Structural Geology	4
GEOL 302	Mineralogy and Petrology	4
	GEOL 464 or ENVS 351	4
	Sub-Total Credits	20

Planetary Science Track

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

Course Code	Title	Credits
ASTR 302	Planetary Science	3
	CHEM 105 and 105L	4
	CHEM 106 and 106L	4
MATH 151	Calculus I	4
MATH 152	Calculus II	4
	Sub-Total Credits	19

and 8 credits selected from the following:

Course Code	Title	Credits
CEMS 235	Thermodynamics of Materials	4
CHEM 343	Physical Chemistry I	4
CHEM 346	Physical Chemistry II	3
GEOL 408	Tectonics	4
GEOL 464	Hydrogeology	4
	Sub-Total Credits	8

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Geology Planetary Science majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Geology Double Major

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

Geology Core

Take one introductory course and the four remaining courses in this section.

Course Code	Title	Credits
	Introductory course: GEOL 101, 103, 104, or 106	4
GEOL 201	Surficial Geology	4
GEOL 301	Structural Geology	4
GEOL 302	Mineralogy and Petrology	4
	GEOL 464 or ENVS 351	4
	Sub-Total Credits	20

General Geology Track:

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

Course Code	Title	Credits
ENVS 205	Environmental Data Analysis	4
GEOL 206	Fieldcraft-Outdoor Proficiency	4
ENVS 220	Introduction to Geographic Information Systems	4
	Sub-Total Credits	12

and 8 credits selected from the following:

Course Code	Title	Credits
ENVS 320	Advanced GIS Applications	4
ENVS 351	Environmental Biogeochemistry	4
GEOL 231	Climate Change Mechanics	4
GEOL 307	Stratigraphy and Sedimentation	4
GEOL 408	Tectonics	4
GEOL 464	Hydrogeology	4

	Sub-Total Credits	8
	Total Credits	40

Geology for Earth Science Educators Double Major

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

Geology Core

Take one introductory course and all four additional courses.

Course Code	Title	Credits
	Introductory course: GEOL 101, 103, 104, or 106	4
GEOL 201	Surficial Geology	4
GEOL 301	Structural Geology	4
GEOL 302	Mineralogy and Petrology	4
	GEOL 464 or ENVS 351	4
	Sub-Total Credits	20

Earth Science Education Track Electives

Take all from this section

Course Code	Title	Credits
MATH 102	Mathematics for Teachers: Grades K-6	4
GEOL 206	Fieldcraft-Outdoor Proficiency	4
	Sub-Total Credits	8

GEOL 206: 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:

Course Code	Title	Credits
ASTR 103	Introductory Astronomy	4
ASTR 107	Elementary Astronomy Lab	2
ENVS 220	Introduction to Geographic Information Systems	4
ENVS 320	Advanced GIS Applications	4

ENVS 351	Environmental Biogeochemistry	4
GEOL 231	Climate Change Mechanics	4
GEOL 307	Stratigraphy and Sedimentation	4
GEOL 408	Tectonics	4
GEOL 464	Hydrogeology	4
SCIE 110	Weather Elements	2
Sub-Total Credits		8

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

Total Credits	36
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Geology Minor

A Geology minor may be obtained by completing (with grades of “C” or better), one 100-level geology course and 16 credit hours of upper level geology courses. ENVS 320 and ENVS 351 may count towards these upper level GEOL electives.

Course Code	Title	Credits
	Introductory course: GEOL 101, 103, 104, or 106	4
	GEOL 200-level or above	8-16
ENVS 320	Advanced GIS Applications	4
ENVS 351	Environmental Biogeochemistry	4
Total Credits		20

Sustainability Minor

Core courses

Course Code	Title	Credits
ENVS 101	Environmental Studies I - Natural Science	4
GEOL 231	Climate Change Mechanics	4
SUST 101	Introduction to Sustainability	4
Sub-Total Credits		12

Electives

Electives are selected by the student and minor advisor, chosen from the list of electives in the Sustainable Practice major. Required completion of 10 elective credits.

Sub-Total Credits	10
Total Credits	22

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.

At least 12 unique credits are required.

Core Courses

Take all courses in this section.

Course Code	Title	Credits
ENVS 101	Environmental Studies I - Natural Science	4
GEOL 231	Climate Change Mechanics	4
PHIL 281	Ethics	4
SUST 101	Introduction to Sustainability	4
Sub-Total Credits		16

Technical Competency

Take one course from this section.

Course Code	Title	Credits
BIOL 226	Biostatistics	4
BUSI 113	Descriptive Analytics & Statistics	3
BUSI 150	Business Analytics Math	3
DATA 202	Data Visualization and Analysis	3
ECON 310	Applied Econometrics and Predictive Analytics	3
ENGR 305	Engineering Statistics	3
ENVS 205	Environmental Data Analysis	4
ENVS 220	Introduction to Geographic Information Systems	4
POLS 230	Introduction to Data Analysis and Statistics	4
SOCI 230	Introduction to Data Analysis and Statistics	4
PSYC 220	Psychological Methods and Statistics	4

	Sub-Total Credits	3-4
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Electives

Take 11 credits from this section. 8 credits must be at the 300 or 400 level.

Course Code	Title	Credits
ANTH 110	Cultural Anthropology	4
ART 382	Ceramic Materials I: Claybodies and Glazes	4
ARTH 367	Landscape Across Cultures	4
BIOL 320	Toxicology	4
BIOL 354	Ecology	4
	BIOL 357 or ENVS 357	4
BIOL 425	Physiological Plant Ecology	4
ENVS 415	Natural Resources Management	3
GEOL 106	Elementary Oceanography	4
GEOL 201	Surficial Geology	4
GEOL 464	Hydrogeology	4
GLBS 101	Introduction to Global Studies	4
MECH 438	Alternative Vehicle Energy Control and Powertrain Design	3
MUSC 205	SOUND GATHERING: Music Sound and Environment	2
POLS 110	American Politics	4
POLS 214	Environment Politics and Society	4
POLS 237	Media and Politics	4
RNEW 201	Renewable Energy	3
RNEW 310	Fuel Cell Principles and Technology	3
RNEW 355	Power System Operation and Economics	3
RNEW 461	Power Electronics for Renewable Systems	3
SJST 101	Introduction to Social Justice Studies	4
SJST 304	Equality	2
SOCI 110	Introduction to Sociology	4
	Sub-Total Credits	11

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

Capstone

Course Code	Title	Credits
ENVS 450	Independent Study	1-4
	Sub-Total Credits	2-4
	Total Credits	32

Equestrian

Equestrian Studies Minor

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.

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.

Requirements for the Minor in Equestrian Studies

Theory Courses

Course Code	Title	Credits
EQUUS 200	Special Topics	1-4
EQUUS 216	Horse Show Management	4
EQUUS 218	Judging Horse Shows	4
EQUUS 223	Hunter and Jumping Course Design	2
Sub-Total Credits		8-12

Activity Courses

Course Code	Title	Credits
EQUUS 100	Special Topics	2-4
EQUUS 101	Introduction to Riding Level I	2
EQUUS 102	Introduction to Riding: Level II	2
EQUUS 105	Introduction to Dressage	2
EQUUS 110	Fundamentals of English Equitation	2
EQUUS 111	Development of the English Rid	2
EQUUS 120	Fundamentals of Western Horsemanship	2
EQUUS 121	Development of the Western Rider	2
Sub-Total Credits		4-8
Total Credits		16

Global Studies

Global Studies BA

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.

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.

I. Introduction to Global Studies

Complete the following:

Course Code	Title	Credits
GLBS 101	Introduction to Global Studies	4
Sub-Total Credits		4

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)

Sub-Total Credits		4
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III. Second Language:

Second-semester competency required (successful completion of GRMN/FREN/SPAN/CHIN 102) or equivalent language placement exam.

	Sub-Total Credits	8
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IV. 3 out of 4 of the following:

Course Code	Title	Credits
SOCI 110	Introduction to Sociology	4
ECON 202	Principles of Macroeconomics	3
HIST 107	The World in the 20th Century	4
POLS 150	World Politics	4
	Sub-Total Credits	11-12

V. Electives

Choose 16 elective credits from at least 3 of the Categories 1-6, including at least 2 courses at the 300 or 400 level.

Course Code	Title	Credits
	1. Off Campus Study	
OCST 301	Cultural Orientation Reflection and Engagement	2
	2. History	
HIST 111	Modern Western History	4
HIST 120	The Ancient Mediterranean	4
HIST 130	Aztecs Incas and Conquistadors: Colonialism in the Americas	4
HIST 153	Modern Latin American History	4
HIST 162	Modern East Asia: Japan China and Korea	4
HIST 223	German History into the 21st Century	4
HIST 232	African Kingdoms-Egypt-Kongo	4
HIST 310	The Ancient Greeks	4
HIST 311	The Roman World	4
HIST 321	The History of Fascism	4
HIST 330	Southern Africa: Between Mandela and Mugabe	2
HIST 340	Ukraine: Between Putin and the West	2
HIST 358	Modern China	4
HIST 363	Goths Saxons and Vikings: The Germanic Tribes from Roman Times to the Norman Conquest	4
HIST 388	Empire and Nation in Eastern Europe	4
	3. Political Science/Sociology	
POLS 253	Dictatorship and Democracy	4
POLS 351	European Politics	4
POLS 373	Terrorism and International Security	4
POLS 382	Latin American Politics	4
POLS 354	History and Politics of the Middle East	4
SOCI 343	Race and Ethnicity	4
	4. Economics and Business	

BUSI 305	German Auto Industry	4
BUSI 457	International Business	3
ECON 202	Principles of Macroeconomics	3
ECON 412	International Economics	3
FIN 458	International Financial Management	3
MKTG 489	International Marketing	3

BUSI 457, FIN 458, MKTG 489: These courses have prerequisites; see course descriptions

5. Art/Literature/Communications/Language

ARTH 126	Buddhist Arts of Asia	2
ARTH 127	Arts of Ancient India	2
ARTH 304	Global Arts: Contemporary Asia	4
ARTH 305	South Asian Arts 15-20c: Mughals to Modern	4
ARTH 306	Arts of Japan	4
ARTH 307	East Asian Design and Material Culture	4
ARTH 354	Recent Sculptural Practices	4
ARTH 382	Gender and Art History: Feminist Art in a Global Frame	4
ARTH 466	Histories of Photography in the Non-Western World	4
COMM 221	Pop Culture Goes Global	4
COMM 315	Understanding Global Media and Cultural Change	4
COMM 325	Global Communication	4
ENGL 226	The Holocaust and Literature	4
ENGL 481	International Women Writers	4
FREN 311	French Literature I	4
FREN 316	Contemporary French Culture	4
MUSC 211	World Music	4
SPAN 217	Exiled from Justice: Equatorial Guinean Writers in Africa and Spain	4
SPAN 218	The Bombs and Ballots of Basque Literature in Spain	4
SPAN 220	Literatura Infantil y Juvenil	4
SPAN 215	Framing Gender: Latin American Film	4
SPAN 216	Cuba Close Up: Film since the Revolution	4
SPAN 311	Peninsular Culture and Literature I: Medieval - Eighteenth Century	4
SPAN 312	Peninsular Culture and Literature II: 19th - 20th Century	4
SPAN 315	Latin American Culture and Literature I	4
SPAN 316	Latin American Culture and Literature II	4
WGST 215	Framing Gender: Latin American Film	4
WGST 216	Cuba Close Up: Film since the Revolution	4
WGST 382	Gender and Art History: Feminist Art in a Global Frame	4
WGST 481	International Women Writers	4

Some courses have prerequisites; see course descriptions

6. Philosophy and Religion		
RLGS 105	Introduction to Religions of the World	4
Sub-Total Credits		16

Other classes may be included in the Global Studies major with permission from the Director or your global studies advisor. Special topics classes are taught once or twice to capture a specific interest or explore a new area and may count toward the program as electives. All university attributed Global Perspective (GP) courses may count as electives, in the related elective category.

CLAS General Education Requirements

Complete remaining [CLAS General Education Requirements](#). Global Studies majors complete 16-32 general education credits as part of their degree program, depending on course selection.

Sub-Total Credits		20-36
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Total Credits		124
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Global Studies Double Major

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.

I. Introduction to Global Studies

Course Code	Title	Credits
GLBS 101	Introduction to Global Studies	4
Sub-Total Credits		4

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:

Second-semester competency required (successful completion of GRMN/FREN/SPAN/CHIN 102) or equivalent language placement exam.

Sub-Total Credits	8
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IV. 3 out of 4 of the following:

Course Code	Title	Credits
SOCI 110	Introduction to Sociology	4
ECON 202	Principles of Macroeconomics	3
HIST 107	The World in the 20th Century	4
POLS 150	World Politics	4
Sub-Total Credits		11-12

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.

Course Code	Title	Credits
1. Off Campus Study		
OCST 301	Cultural Orientation Reflection and Engagement	2
2. History		
HIST 111	Modern Western History	4
HIST 120	The Ancient Mediterranean	4
HIST 130	Aztecs Incas and Conquistadors: Colonialism in the Americas	4
HIST 153	Modern Latin American History	4
HIST 162	Modern East Asia: Japan China and Korea	4
HIST 223	German History into the 21st Century	4
HIST 232	African Kingdoms-Egypt-Kongo	4

HIST 310	The Ancient Greeks	4
HIST 311	The Roman World	4
HIST 321	The History of Fascism	4
HIST 330	Southern Africa: Between Mandela and Mugabe	2
HIST 340	Ukraine: Between Putin and the West	2
HIST 358	Modern China	4
HIST 363	Goths Saxons and Vikings: The Germanic Tribes from Roman Times to the Norman Conquest	4
HIST 388	Empire and Nation in Eastern Europe	4
3. Political Science/Sociology		
POLS 253	Dictatorship and Democracy	4
POLS 351	European Politics	4
POLS 373	Terrorism and International Security	4
POLS 382	Latin American Politics	4
POLS 354	History and Politics of the Middle East	4
SOCI 343	Race and Ethnicity	4
4. Economics and Business		
BUSI 305	German Auto Industry	4
BUSI 457	International Business	3
ECON 202	Principles of Macroeconomics	3
ECON 412	International Economics	3
FIN 458	International Financial Management	3
MKTG 489	International Marketing	3

BUSI 457, FIN 458, MKTG 489: These courses have prerequisites; see course descriptions

5. Art/Literature/Communications/Language		
ARTH 126	Buddhist Arts of Asia	2
ARTH 127	Arts of Ancient India	2
ARTH 304	Global Arts: Contemporary Asia	4
ARTH 305	South Asian Arts 15-20c: Mughals to Modern	4
ARTH 306	Arts of Japan	4
ARTH 307	East Asian Design and Material Culture	4
ARTH 354	Recent Sculptural Practices	4
ARTH 382	Gender and Art History: Feminist Art in a Global Frame	4
ARTH 466	Histories of Photography in the Non-Western World	4
COMM 221	Pop Culture Goes Global	4
COMM 315	Understanding Global Media and Cultural Change	4
COMM 325	Global Communication	4
ENGL 226	The Holocaust and Literature	4
ENGL 481	International Women Writers	4
FREN 311	French Literature I	4

FREN 316	Contemporary French Culture	4
MUSC 211	World Music	4
SPAN 217	Exiled from Justice: Equatorial Guinean Writers in Africa and Spain	4
SPAN 218	The Bombs and Ballots of Basque Literature in Spain	4
SPAN 220	Literatura Infantil y Juvenil	4
SPAN 215	Framing Gender: Latin American Film	4
SPAN 216	Cuba Close Up: Film since the Revolution	4
SPAN 311	Peninsular Culture and Literature I: Medieval - Eighteenth Century	4
SPAN 312	Peninsular Culture and Literature II: 19th - 20th Century	4
SPAN 315	Latin American Culture and Literature I	4
SPAN 316	Latin American Culture and Literature II	4
WGST 215	Framing Gender: Latin American Film	4
WGST 216	Cuba Close Up: Film since the Revolution	4
WGST 382	Gender and Art History: Feminist Art in a Global Frame	4
WGST 481	International Women Writers	4

Some courses have prerequisites; see course descriptions

6. Philosophy and Religion		
RLGS 105	Introduction to Religions of the World	4
Sub-Total Credits		16

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

Total Credits	39-40
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Global Studies 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.

Requirements for Global Studies Minor

Foundation Courses (required)

Course Code	Title	Credits
GLBS 101	Introduction to Global Studies	4
	8 credit hours language instruction	8
Sub-Total Credits		12

Second Language: Second-semester competency required (successful completion of GRMN/FREN/SPAN/CHIN 102) or equivalent language placement exam with at least 8 credit hours of language instruction.

Electives

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

Course Code	Title	Credits
ECON 202	Principles of Macroeconomics	3
HIST 107	The World in the 20th Century	4
POLS 150	World Politics	4
SOCI 110	Introduction to Sociology	4
Sub-Total Credits		7-8

Other Requirements

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

Sub-Total Credits	8
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Study Abroad

At least one semester recommended.

Total Credits	20-28
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Health and Human Performance

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 pursue 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.

Coaching Minor

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.

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.

Required Courses:

Course Code	Title	Credits
COAC 291	Philosophy Principles and Organization of Athletics in Education	3
COAC 301	Health Sciences Applied to Coaching	3
COAC 475	Theories and Techniques of Coaching Sports	2
ATHT 111	Emergency Medicine in Athletic Training	3
ATHT 190	Basics of Strength Training and Conditioning	2
ATHT 222	Nutrition for Human Performance and Exercise	2
Sub-Total Credits		15

Electives* (Take at least 5 credits):

*As approved by advisor related special topics courses may be counted as electives.

Course Code	Title	Credits
ATHT 103	Prevention and Care of Athletic Injuries	4
ATHT 215	Personal Health and Wellness	2
ATHT 232	Introduction to Sports Management	3
Sub-Total Credits		5

	Total Credits	20
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Exercise Science Minor

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.

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.

Required Courses:

Course Code	Title	Credits
ATHT 103	Prevention and Care of Athletic Injuries	4
ATHT 111	Emergency Medicine in Athletic Training	3
ATHT 190	Basics of Strength Training and Conditioning	2
ATHT 205	Structural Kinesiology	3
ATHT 215	Personal Health and Wellness	2
ATHT 222	Nutrition for Human Performance and Exercise	2
ATHT 393	Physiology of Exercise	3
BIOL 307	Anatomy and Physiology: Nerves Muscles Skeleton	4
BIOL 308	Anatomy and Physiology: Viscera	4
	Sub-Total Credits	27
	Total Credits	27

Health Fitness Management BS

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 Liberal Arts and Sciences General Education requirements, and the Alfred University requirements for Common Ground, Lifetime Wellness, 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.

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.

Health and Fitness Core Courses

Take all courses in this section.

Course Code	Title	Credits
ATHT 105	Perspectives in the Health Professions	3
ATHT 110	Medical Sciences	2
SPHS 111	Emergency Care in Health and Human Performance	3
SPHS 190	Principles of Strength Training and Reconditioning	2
ATHT 205	Structural Kinesiology	3
ATHT 215	Personal Health and Wellness	2
SPHS 222	Nutrition for Health and Human Performance	2
ATHT 242	Sports Society and Ethics	3
SPHS 392	Biomechanics	3
SPHS 393	Physiology of Exercise	3
SPHS 432	Organization and Administration of Athletics	2
SPHS 459	Research Methods in Sports Health and Sciences	2
HFMT 305	Field Experience in Health Fitness Management	1
HFMT 405	Program Design and Implementation in Health Fitness Management	3
HFMT 410	Exercise Prescription	4
HFMT 420	Special Populations and Health Appraisal	2
HFMT 485	Internship	2
HFMT 490	Senior Seminar	1
HFMT 495	Health Promotion Program Design	2
Sub-Total Credits		45

Business Foundation Courses

Course Code	Title	Credits
ACCT 211	Financial Accounting	3
MKTG 221	Marketing Principles and Management	3
LAW 241	The Legal Environment of Business	3

MGMT 328	Management and Organizational Behavior	3
ECON 420	Healthcare Economics	3
Sub-Total Credits		15

Related Courses

Take all courses in this section.

Course Code	Title	Credits
BIOL 119	Physiology of Aging	4
BIOL 150	Biological Foundations	4
BIOL 307	Anatomy and Physiology: Nerves Muscles Skeleton	4
BIOL 308	Anatomy and Physiology: Viscera	4
BUSI 113	Descriptive Analytics & Statistics	3
COMM 101	Introduction to Communication Studies	4
PSYC 101	Introduction to Psychology	4
PSYC 251	Principles of Learning and Behavior Modification	4
PSYC 322	Health Psychology	2-4
Sub-Total Credits		33-35

CLAS General Education Requirements

Complete remaining [CLAS General Education Requirements](#). Health and Fitness Management majors complete 16 credits of general education requirements as part of their degree program.

Sub-Total Credits	36
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Total Credits	124
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Sports and Health Sciences BS: 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.

Major Requirements

Core

Take all of the following:

Course Code	Title	Credits
SPHS 101	Introduction to Sports and Health Sciences	3
SPHS 102	Medical Terminology	2
SPHS 103	Foundations of Sport Injury and Illness	3
	SPHS 111 or 231	3
SPHS 222	Nutrition for Health and Human Performance	2
SPHS 301	Clinical Experience in Sports Health and Sciences I	1
SPHS 392	Biomechanics	3
SPHS 393	Physiology of Exercise	3
SPHS 394	Principles of Strength Training and Reconditioning	2
SPHS 401	Clinical Experience in Sports Health and Sciences II	1-2
SPHS 459	Research Methods in Sports Health and Sciences	2
SPHS 470	Capstone in Sports and Health Sciences	1
	Sub-Total Credits	26-27

Related Courses

Course Code	Title	Credits
BIOL 150	Biological Foundations	4
BIOL 211	Cell Biology	4
BIOL 307	Anatomy and Physiology: Nerves Muscles Skeleton	4
BIOL 308	Anatomy and Physiology: Viscera	4
CHEM 105	General Chemistry I	3
CHEM 105L	General Chemistry I Laboratory	1
PHYS 111	Introductory General Physics I	4
PSYC 101	Introduction to Psychology	4
	Statistics requirement	3-4
BIOL 226	Biostatistics	4
BUSI 113	Descriptive Analytics & Statistics	3
ENGR 305	Engineering Statistics	3

MATH 381	Mathematical Statistics	4
POLS 230	Introduction to Data Analysis and Statistics	4
PSYC 220	Psychological Methods and Statistics	4
SOCI 230	Introduction to Data Analysis and Statistics	4
Sub-Total Credits		31-32

SPHS: General Sports and Health Sciences Electives

Complete 17 credits from the following list.

Course Code	Title	Credits
SPHS 211	Orthopedic Assessment I	4
SPHS 212	Orthopedic Assessment II	4
SPHS 232	EMT Basic II	3
SPHS 303	Prevention and Care Strategies for Sport Injury and Illness	2
SPHS 310	Orthopedic Procedures	2
SPHS 320	Psychosocial Strategies Sports	2
SPHS 350	Therapeutic Interventions	4
SPHS 395	Strength Training and Reconditioning Techniques	2
SPHS 402	Clinical Experience in Sports Health and Sciences III	2-3
SPHS 410	Medical and Pharmacological Aspects in Sports Medicine	3
SPHS 432	Organization and Administration of Athletics	2
BIOL 212	Principles of Genetics	4
BIOL 213	Structure and Function of Organisms	4
BIOL 302	General Microbiology	4
BIOL 420	Biochemistry: Proteins and Metabolism	4
BIOL 422	Biochemistry: Nucleic Acids	4
CHEM 106	General Chemistry II	3
CHEM 106L	General Chemistry II Laboratory	1
CHEM 315	Organic Chemistry I	3
HFMT 405	Program Design and Implementation in Health Fitness Management	3
HFMT 410	Exercise Prescription	4
HFMT 420	Special Populations and Health Appraisal	2
PHYS 112	Introductory General Physics II	4
PSYC 118	Introduction to Adult Development and Aging	4
PSYC 330	Neuropsychology	4
PSYC 342	Psychopathology	4
SOCI 349	Sociology of Health Illness & Dis/ability	4
Sub-Total Credits		17

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Sports and Health Science majors complete 16 credits of quantitative reasoning, social science, and natural science requirements as part of their degree program.

	Sub-Total Credits	36
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Sports and Health Sciences BS: 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.

Major Requirements

Core

Take all of the following:

Course Code	Title	Credits
SPHS 101	Introduction to Sports and Health Sciences	3
SPHS 102	Medical Terminology	2
SPHS 103	Foundations of Sport Injury and Illness	3
	SPHS 111 or 231	3
SPHS 222	Nutrition for Health and Human Performance	2
SPHS 301	Clinical Experience in Sports Health and Sciences I	1
SPHS 392	Biomechanics	3
SPHS 393	Physiology of Exercise	3
SPHS 394	Principles of Strength Training and Reconditioning	2
SPHS 401	Clinical Experience in Sports Health and Sciences II	1-2
SPHS 459	Research Methods in Sports Health and Sciences	2

SPHS 470	Capstone in Sports and Health Sciences	1
Sub-Total Credits		26-27

Related Courses

Course Code	Title	Credits
BIOL 150	Biological Foundations	4
BIOL 211	Cell Biology	4
BIOL 307	Anatomy and Physiology: Nerves Muscles Skeleton	4
BIOL 308	Anatomy and Physiology: Viscera	4
CHEM 105	General Chemistry I	3
CHEM 105L	General Chemistry I Laboratory	1
PHYS 111	Introductory General Physics I	4
PSYC 101	Introduction to Psychology	4
Sub-Total Credits		28

Performance Enhancement Concentration Specific Courses

Course Code	Title	Credits
ATHT 432	Organization and Administration of Athletics	2
HFMT 405	Program Design and Implementation in Health Fitness Management	3
HFMT 410	Exercise Prescription	4
HFMT 420	Special Populations and Health Appraisal	2
SPHS 350	Therapeutic Interventions	4
SPHS 395	Strength Training and Reconditioning Techniques	2
Sub-Total Credits		17

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Sports and Health Science majors complete 16 credits of quantitative reasoning, social science, and natural science requirements as part of their degree program.

Sub-Total Credits	36
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Sports and Health Sciences BS: 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.

Major Requirements

Core

Take all of the following:

Course Code	Title	Credits
SPHS 101	Introduction to Sports and Health Sciences	3
SPHS 102	Medical Terminology	2
SPHS 103	Foundations of Sport Injury and Illness	3
	SPHS 111 or 231	3
SPHS 222	Nutrition for Health and Human Performance	2
SPHS 301	Clinical Experience in Sports Health and Sciences I	1
SPHS 392	Biomechanics	3
SPHS 393	Physiology of Exercise	3
SPHS 394	Principles of Strength Training and Reconditioning	2
SPHS 401	Clinical Experience in Sports Health and Sciences II	1-2
SPHS 459	Research Methods in Sports Health and Sciences	2
SPHS 470	Capstone in Sports and Health Sciences	1
	Sub-Total Credits	26-27

Related Courses

Course Code	Title	Credits
BIOL 150	Biological Foundations	4
BIOL 211	Cell Biology	4
BIOL 307	Anatomy and Physiology: Nerves Muscles Skeleton	4
BIOL 308	Anatomy and Physiology: Viscera	4
CHEM 105	General Chemistry I	3
CHEM 105L	General Chemistry I Laboratory	1
PHYS 111	Introductory General Physics I	4
PSYC 101	Introduction to Psychology	4
	Statistics requirement	3-4
BIOL 226	Biostatistics	4
BUSI 113	Descriptive Analytics & Statistics	3

ENGR 305	Engineering Statistics	3
MATH 381	Mathematical Statistics	4
POLS 230	Introduction to Data Analysis and Statistics	4
PSYC 220	Psychological Methods and Statistics	4
SOCI 230	Introduction to Data Analysis and Statistics	4
Sub-Total Credits		31-32

Pre-Athletic Training Concentration

Course Code	Title	Credits
SPHS 211	Orthopedic Assessment I	4
SPHS 212	Orthopedic Assessment II	4
SPHS 303	Prevention and Care Strategies for Sport Injury and Illness	2
SPHS 350	Therapeutic Interventions	4
SPHS 395	Strength Training and Reconditioning Techniques	2
SPHS 410	Medical and Pharmacological Aspects in Sports Medicine	3
Sub-Total Credits		19

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Sports and Health Science majors complete 16 credits of quantitative reasoning, social science, and natural science requirements as part of their degree program.

Sub-Total Credits	36
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Total Credits	124
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Sports and Health Sciences BS: 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.

Major Requirements

Core

Take all of the following:

Course Code	Title	Credits
SPHS 101	Introduction to Sports and Health Sciences	3
SPHS 102	Medical Terminology	2
SPHS 103	Foundations of Sport Injury and Illness	3
	SPHS 111 or 231	3
SPHS 222	Nutrition for Health and Human Performance	2
SPHS 301	Clinical Experience in Sports Health and Sciences I	1
SPHS 392	Biomechanics	3
SPHS 393	Physiology of Exercise	3
SPHS 394	Principles of Strength Training and Reconditioning	2
SPHS 401	Clinical Experience in Sports Health and Sciences II	1-2
SPHS 459	Research Methods in Sports Health and Sciences	2
SPHS 470	Capstone in Sports and Health Sciences	1
	Sub-Total Credits	26-27

Related Courses

Course Code	Title	Credits
BIOL 150	Biological Foundations	4
BIOL 211	Cell Biology	4
BIOL 307	Anatomy and Physiology: Nerves Muscles Skeleton	4
BIOL 308	Anatomy and Physiology: Viscera	4
CHEM 105	General Chemistry I	3
CHEM 105L	General Chemistry I Laboratory	1
PHYS 111	Introductory General Physics I	4
PSYC 101	Introduction to Psychology	4
	Statistics requirement	3-4
BIOL 226	Biostatistics	4
BUSI 113	Descriptive Analytics & Statistics	3
ENGR 305	Engineering Statistics	3
MATH 381	Mathematical Statistics	4
POLS 230	Introduction to Data Analysis and Statistics	4
PSYC 220	Psychological Methods and Statistics	4
SOCI 230	Introduction to Data Analysis and Statistics	4
	Sub-Total Credits	31-32

Pre-Physician Assistant Concentration Specific Courses

Course Code	Title	Credits
SPHS 232	EMT Basic II	3
	BIOL 212 or 213	4
BIOL 302	General Microbiology	4
	BIOL 420 or BIOL 422	4
CHEM 106	General Chemistry II	3
CHEM 106L	General Chemistry II Laboratory	1
CHEM 315	Organic Chemistry I	3
	SOCI 110, PSYC 118, or PSYC 342	4
	Sub-Total Credits	26

CLAS General Education Requirements

Complete remaining [CLAS General Education](#) requirements. Sports and Health Science majors complete 16 credits of quantitative reasoning, social science, and natural science requirements as part of their degree program.

	Sub-Total Credits	36
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Sports and Health Sciences BS: 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.

Major Requirements

Core

Take all of the following:

Course Code	Title	Credits
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SPHS 101	Introduction to Sports and Health Sciences	3
SPHS 102	Medical Terminology	2
SPHS 103	Foundations of Sport Injury and Illness	3
	SPHS 111 or 231	3
SPHS 222	Nutrition for Health and Human Performance	2
SPHS 301	Clinical Experience in Sports Health and Sciences I	1
SPHS 392	Biomechanics	3
SPHS 393	Physiology of Exercise	3
SPHS 394	Principles of Strength Training and Reconditioning	2
SPHS 401	Clinical Experience in Sports Health and Sciences II	1-2
SPHS 459	Research Methods in Sports Health and Sciences	2
SPHS 470	Capstone in Sports and Health Sciences	1
	Sub-Total Credits	26-27

Related Courses

Course Code	Title	Credits
BIOL 150	Biological Foundations	4
BIOL 211	Cell Biology	4
BIOL 307	Anatomy and Physiology: Nerves Muscles Skeleton	4
BIOL 308	Anatomy and Physiology: Viscera	4
CHEM 105	General Chemistry I	3
CHEM 105L	General Chemistry I Laboratory	1
PHYS 111	Introductory General Physics I	4
PSYC 101	Introduction to Psychology	4
	Statistics requirement	3-4
BIOL 226	Biostatistics	4
BUSI 113	Descriptive Analytics & Statistics	3
ENGR 305	Engineering Statistics	3
MATH 381	Mathematical Statistics	4
POLS 230	Introduction to Data Analysis and Statistics	4
PSYC 220	Psychological Methods and Statistics	4
SOCI 230	Introduction to Data Analysis and Statistics	4
	Sub-Total Credits	31-32

Rehabilitation Sciences Concentration Specific Courses

Complete the following.

Course Code	Title	Credits
SPHS 211	Orthopedic Assessment I	4
SPHS 212	Orthopedic Assessment II	4
SPHS 350	Therapeutic Interventions	4

	BIOL 212 or 213	4
CHEM 106	General Chemistry II	3
CHEM 106L	General Chemistry II Laboratory	1
	SOCI 110, PSYC 118, or PSYC 342	4
	Sub-Total Credits	24

CLAS General Education Requirements

Complete remaining [CLAS General Education](#) requirements. Sports and Health Science Rehabilitation majors complete 16 -20 credits of quantitative reasoning, social science, and natural science requirements as part of their degree program.

	Sub-Total Credits	32-36
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Sports and Health Sciences Minor

The minor provides students with the ability to address the growing concerns of society about injury prevention, wellness, fitness, and rehabilitation.

Required minor core

Take all of the following:

Course Code	Title	Credits
SPHS 101	Introduction to Sports and Health Sciences	3
SPHS 102	Medical Terminology	2
SPHS 103	Foundations of Sport Injury and Illness	3
	SPHS 111 or 231	3
SPHS 222	Nutrition for Health and Human Performance	2
	Sub-Total Credits	13

Electives

Complete 13 credits from the following list.

Course Code	Title	Credits
BIOL 307	Anatomy and Physiology: Nerves Muscles Skeleton	4
BIOL 308	Anatomy and Physiology: Viscera	4
HFMT 405	Program Design and Implementation in Health Fitness Management	3
HFMT 410	Exercise Prescription	4
HFMT 420	Special Populations and Health Appraisal	2
SPHS 211	Orthopedic Assessment I	4
SPHS 212	Orthopedic Assessment II	4
SPHS 232	EMT Basic II	3
SPHS 303	Prevention and Care Strategies for Sport Injury and Illness	2
SPHS 350	Therapeutic Interventions	4
SPHS 392	Biomechanics	3
SPHS 393	Physiology of Exercise	3
SPHS 395	Strength Training and Reconditioning Techniques	2
Sub-Total Credits		13

Students completing the Sports and Health Sciences minor at Alfred must complete at least 50% of the course work for the minor at Alfred. A grade of at least "C" must be attained for courses counted for the minor.

	Total Credits	26
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Sports Management Minor

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.

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.

Required Courses:

Course Code	Title	Credits
ATHT 232	Introduction to Sports Management	3
ATHT 242	Sports Society and Ethics	3
ATHT 432	Organization and Administration of Athletics	2
BUSI 485	Internship	1-4
COMM 302	Public Relations Principles	4
LAW 241	The Legal Environment of Business	3
MGMT 328	Management and Organizational Behavior	3
MKTG 221	Marketing Principles and Management	3
Sub-Total Credits		22-25

	Total Credits	22-25
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Human Studies

History BA

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.

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. 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.

Requirements for the major

History Methods Courses

Course Code	Title	Credits
HIST 304	Historian's Craft: The Past	2
HIST 305	Historian's Craft: The Future	2
HIST 410	Writing History	4
Sub-Total Credits		8

History Electives

A total of 26 additional credit hours in history is required. Of these hours, 18 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.

Sub-Total Credits	26
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CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). History majors may complete 4 credits of general education requirements as part of their degree program, depending on course selection.

Sub-Total Credits	48-52
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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History 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.

Requirements for the major

History Methods Courses

Course Code	Title	Credits
HIST 304	Historian's Craft: The Past	2
HIST 305	Historian's Craft: The Future	2
HIST 410	Writing History	4
Sub-Total Credits		8

History Elective Courses

A total of 26 additional credit hours in history is required. Of these hours, 18 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.

Sub-Total Credits	26
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All courses used to complete the double major must have grades of "C" or better.

Total Credits	34
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History Minor

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

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.

	Total Credits	20
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Philosophy BA

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.

Upon completion of this program a student is able to:

1. Evaluate the nature and quality of philosophical arguments they are presented with
2. Construct their own philosophical arguments with rigor and clarity
3. Discuss links between philosophy and other cultural phenomena, e.g. natural science, the arts, politics, and religion
4. Read texts carefully, sensitively and critically
5. Demonstrate knowledge of at least two periods or movements in the history of philosophy
6. Demonstrate familiarity with several ongoing debates in contemporary philosophy

Required Courses

The philosophy major consists of 32 credits in philosophy (at least 20 of which must be 300 level or above). With permission of the major advisor, a student may substitute up to 4 credits of the 32 from a related discipline.

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

	Sub-Total Credits	32
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CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Philosophy majors complete 4 credits of general education requirements as part of their degree program.

	Sub-Total Credits	54
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)

- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Philosophy Double Major

Required Courses

The philosophy major consists of 32 credits in philosophy (at least 20 of which must be 300 level or above). With permission of the major advisor, a student may substitute up to 4 credits of the 32 from a related discipline.

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

	Sub-Total Credits	32
	Total Credits	32

Philosophy Minor

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.

	Total Credits	20
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Religious Studies Minor

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.

	Total Credits	20
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Interdisciplinary

Individually Structured Major BA

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, Social Justice and Popular Media, and Sustainability and Food Systems Journalism.

CLAS General Education Requirements

Complete the [CLAS General Education Requirements](#). Some general education courses may be completed as part of the proposed ISM major.

	Sub-Total Credits	52
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Interdepartmental Major BA

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.

CLAS General Education Requirements

Complete the [CLAS General Education Requirements](#).

	Sub-Total Credits	52
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Life and Physical Science BA: Applied Sciences Track

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 and Biochemistry, Chemistry and Physics and Astronomy.

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

Core Classes

Take all of the following:

Course Code	Title	Credits
BIOL 150	Biological Foundations	4
CHEM 105	General Chemistry I	3
CHEM 105L	General Chemistry I Laboratory	1
ENVS 101	Environmental Studies I - Natural Science	4
MATH 151	Calculus I	4
	PHYS 111 or 125	4
	Geology Core: GEOL 101, 104, or 201	4
	Sub-Total Credits	24

Applied Sciences Track

Take all of the following courses:

Course Code	Title	Credits
CHEM 106	General Chemistry II	3
CHEM 106L	General Chemistry II Laboratory	1
MATH 152	Calculus II	4
	PHYS 112 or 126	4
ENGR 101	Introduction to Engineering	2
ENGR 102	Computer Aided Design	2
ENGR 104	Computer Aided Engineering	2
ENGR 117	Engineering Foundations	2
ENGR 117L	Lab-Engineering Foundations II	0
	Sub-Total Credits	20

Applied Science Electives

Complete 10 credits from the following list of courses, or from any 300-level or above course with these subject codes: SCIE; CHEM; BIOL; PHYS; GEOL; OR ENVS.

Course Code	Title	Credits
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CEMS 203	Introduction to Ceramic Powder Processing	3
CEMS 214	Structure and Properties of Materials	3
CEMS 314	Ceramic Processing Principles	3
CEMS 316	Chemical Processing in Ceramics	3
CEMS 318	Refractories	3
CEMS 352	Electroceramics	3
CEMS 368	Introduction to Bioengineering	3
ENGR 210	Discovery and Disaster	2
ENGR 305	Engineering Statistics	3
ENGR 306	Engineering Economics	2
MATH 253	Calculus III	4
MATH 271	Differential Equations	3
MATH 281	Foundations of Higher Mathematics	4
MATH 371	Linear Algebra	4
MATH 381	Mathematical Statistics	4
MECH 211	Statics	3
RNEW 201	Renewable Energy	3
RNEW 255	Power System Operation and Economics	3
RNEW 303	Software Engineering	4
RNEW 310	Fuel Cell Principles and Technology	3
Sub-Total Credits		10

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Life and Physical Science majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Total Credits	124
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Life and Physical Science BA: General Science Track

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 and Biochemistry, Chemistry and Physics and Astronomy.

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

Core Classes

Take all of the following:

Course Code	Title	Credits
BIOL 150	Biological Foundations	4
CHEM 105	General Chemistry I	3
CHEM 105L	General Chemistry I Laboratory	1
ENVS 101	Environmental Studies I - Natural Science	4
MATH 151	Calculus I	4
	PHYS 111 or 125	4
	Geology Core: GEOL 101, 104, or 201	4
	Sub-Total Credits	24

General Science Track

Take all of the following:

Course Code	Title	Credits
CHEM 106	General Chemistry II	3
CHEM 106L	General Chemistry II Laboratory	1
	PHYS 112 or 126	4
	Supporting field electives: CSCI 156 or MATH 152	4
	Sub-Total Credits	12

General Science Electives

Take one of the following courses, not duplicated in Core. In addition, complete a minimum of 10 credits of 300-level or above courses from these subject codes: SCIE; CHEM; BIOL; PHYS; GEOL; OR ENVS.

Course Code	Title	Credits
ENVS 205	Environmental Data Analysis	4
ENVS 220	Introduction to Geographic Information Systems	4
GEOL 101	This Dynamic Earth	4
GEOL 104	Earth and Life through Time	4
GEOL 106	Elementary Oceanography	4

GEOL 201	Surficial Geology	4
	10 credits at 300 level or above from BIOL, CHEM, ENVS, GEOL, PHYS, or SCIE	10
	Sub-Total Credits	14

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Life and Physical Science majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Total Credits	124
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Life and Physical Science BA: Human Health Sciences Track

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 Divisions of Biology and Biochemistry, Chemistry and Physics and Astronomy.

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

Core Classes

Take all of the following:

Course Code	Title	Credits
BIOL 150	Biological Foundations	4
CHEM 105	General Chemistry I	3
CHEM 105L	General Chemistry I Laboratory	1
ENVS 101	Environmental Studies I - Natural Science	4
MATH 151	Calculus I	4
	PHYS 111 or 125	4

	Geology Core: GEOL 101, 104, or 201	4
	Sub-Total Credits	24

Human Health Sciences Track

Take all of the following:

Course Code	Title	Credits
BIOL 211	Cell Biology	4
BIOL 212	Principles of Genetics	4
CHEM 106	General Chemistry II	3
CHEM 106L	General Chemistry II Laboratory	1
CHEM 315	Organic Chemistry I	3
CHEM 315L	Laboratory-Organic Chem I	1
CHEM 316	Organic Chemistry II	3
CHEM 316L	Laboratory-Organic Chem II	1
	Sub-Total Credits	20

Human Health Science Electives

Complete a minimum of 10 credits from the following courses. CHEM 400 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.

Course Code	Title	Credits
BIOL 302	General Microbiology	4
BIOL 307	Anatomy and Physiology: Nerves Muscles Skeleton	4
BIOL 308	Anatomy and Physiology: Viscera	4
BIOL 315	Genetics and Evolution of Populations	4
BIOL 420	Biochemistry: Proteins and Metabolism	4
BIOL 400	Research Topics	4-5
CHEM 400	Advanced Chemistry Topics	1-4
	Sub-Total Credits	10

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Life and Physical Science majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

	Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)

- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Life and Physical Science BA: Scientific Communications Track

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 and Biochemistry, Chemistry and Physics and Astronomy.

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

Core Classes

Take all of the following:

Course Code	Title	Credits
BIOL 150	Biological Foundations	4
CHEM 105	General Chemistry I	3
CHEM 105L	General Chemistry I Laboratory	1
ENVS 101	Environmental Studies I - Natural Science	4
MATH 151	Calculus I	4
	PHYS 111 or 125	4
	Geology Core: GEOL 101, 104, or 201	4
	Sub-Total Credits	24

Scientific Communications Track

Take three of the following:

Course Code	Title	Credits
COMM 101	Introduction to Communication Studies	4
COMM 110	Mass Media and American Life	4
COMM 205	Introduction to News and Media	4
ENGR 110	Technical Communications	4
	Sub-Total Credits	12

Take one of the following:

Course Code	Title	Credits
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COMM 200	Special Topics in Communication	1-4
COMM 302	Public Relations Principles	4
COMM 309	Persuasion: Reception and Responsibility	4
Sub-Total Credits		4

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

Course Code	Title	Credits
BIOL 130	Introduction to Human Genetics	4
BIOL 211	Cell Biology	4
BIOL 307	Anatomy and Physiology: Nerves Muscles Skeleton	4
	CHEM 106 and 106L	4
ENVS 205	Environmental Data Analysis	4
ENVS 220	Introduction to Geographic Information Systems	4
GEO 101	This Dynamic Earth	4
GEO 104	Earth and Life through Time	4
GEO 106	Elementary Oceanography	4
GEO 201	Surficial Geology	4
	PHYS 112 or 126	4
Sub-Total Credits		4

Science Communication Electives

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

Sub-Total Credits	10
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CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Life and Physical Science majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Mathematics & Computer Science

Mathematics and 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 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.

Honors in Mathematics

Honors in the Field of Specialization

(Candidates recognized at Commencement)

- Complete at least 2 credits of [MATH 450](#) with a C or better
- Deliver an oral presentation on [MATH 450](#)
- Maintain a cumulative 3.30 GPA in mathematics courses

Pi Mu Epsilon National Honorary Society

(Candidates recognized at Honors Convocation)

- Complete [MATH 281](#) with a C or better

- Maintain a cumulative 3.00 GPA in mathematics courses

Honors in Computer Science
Honors in the Field of Specialization

(Candidates recognized at Commencement)

- Complete at least 2 credits of [CSCI 450](#) with a C or better
- Deliver an oral presentation on [CSCI 450](#)
- Maintain a cumulative 3.30 GPA in mathematics courses

Computer Science BA

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.

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.

Core requirements

Take all courses in this section.

Course Code	Title	Credits
CSCI 156	Computer Science I	4
CSCI 157	Computer Science II	4
CSCI 206	Algorithm Design	4
CSCI 225	Computer Organization	4
CSCI 305	Theory of Computation	4
CSCI 425	Operating Systems	4
MATH 151	Calculus I	4
	MATH 181 or MATH 281	4
	Sub-Total Credits	32

Elective requirements

Complete 13 credit hours of computer science courses and electives from the following list, at least 8 of which must be 300-level or higher.

Course Code	Title	Credits
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CSCI 311	Database Systems	4
CSCI 315	Computer Networking	4
MATH 231	Introduction to Data Science	4
MATH 351	Introduction to Operations Research	4
MATH 371	Linear Algebra	4
MATH 381	Mathematical Statistics	4
Sub-Total Credits		13

Other elective courses may be approved with Division permission. Since some elective computer science courses require prerequisite courses and are offered only in the spring, fall, or every other year, students must plan the sequence of courses for the major carefully and in advance

All major courses must be passed with a grade of C or better.

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Computer Science majors complete 4 credits of quantitative reasoning requirements as part of their degree program.

Sub-Total Credits	48
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Total Credits	124
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Computer Science 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.

Core requirements

Course Code	Title	Credits
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CSCI 156	Computer Science I	4
CSCI 157	Computer Science II	4
CSCI 206	Algorithm Design	4
CSCI 225	Computer Organization	4
CSCI 305	Theory of Computation	4
CSCI 425	Operating Systems	4
MATH 151	Calculus I	4
	MATH 181 or MATH 281	4
	Sub-Total Credits	32

Elective requirements

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

Course Code	Title	Credits
CSCI 311	Database Systems	4
CSCI 315	Computer Networking	4
MATH 231	Introduction to Data Science	4
MATH 351	Introduction to Operations Research	4
MATH 371	Linear Algebra	4
MATH 381	Mathematical Statistics	4
	Sub-Total Credits	13

All major courses must be passed with a grade of C or better. Since some elective computer science courses require prerequisite courses and are offered only in the spring, fall, or every other year, students must plan the sequence of courses for the major carefully and in advance.

	Total Credits	45
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Computer Science Minor

The minor in computer science provides students with a broad introduction to modern programming, web development, and software engineering.

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.

Required courses

Complete all of the following:

Course Code	Title	Credits
CSCI 156	Computer Science I	4
CSCI 157	Computer Science II	4
CSCI 206	Algorithm Design	4

	Sub-Total Credits	12
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Electives

Complete 12 credits of minor electives.

Course Code	Title	Credits
CSCI 225	Computer Organization	4
CSCI 305	Theory of Computation	4
CSCI 311	Database Systems	4
CSCI 315	Computer Networking	4
CSCI 425	Operating Systems	4
MATH 181	Discrete Mathematics	4
MATH 231	Introduction to Data Science	4
MATH 281	Foundations of Higher Mathematics	4
MATH 351	Introduction to Operations Research	4
MATH 371	Linear Algebra	4
MATH 381	Mathematical Statistics	4
	Sub-Total Credits	12

Other elective courses may be approved with Division permission

	Total Credits	24
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Data Science Minor

Innovations in technology have led to a substantial growth in available data that must be aggregated, manipulated, integrated, and analyzed. The minor in Data Science gives students an overview of big data and the techniques for handling it. This minor is an asset to any discipline involving data-driven analysis and inference.

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.

Requirements for the minor in Data Science:

Course Code	Title	Credits
CSCI 156	Computer Science I	4
CSCI 205	Database Systems	4
MATH 151	Calculus I	4
MATH 231	Introduction to Data Science	4
	Electives for the minor in Data Science	6-8
BIOL 226	Biostatistics	4
BIOL 405	Bioinformatics	4

BUSI 113	Descriptive Analytics & Statistics	3
ENGR 305	Engineering Statistics	3
ENVS 205	Environmental Data Analysis	4
ENVS 220	Introduction to Geographic Information Systems	4
MATH 351	Introduction to Operations Research	4
MATH 371	Linear Algebra	4
MATH 381	Mathematical Statistics	4
MKTG 452	Market Research	3
POLS 230	Introduction to Data Analysis and Statistics	4
SOCI 230	Introduction to Data Analysis and Statistics	4

Other elective courses may be approved with Division permission.

	Sub-Total Credits	22-24
	Total Credits	22-24

Mathematics BA

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.

All major courses must be passed with a grade of C or better.

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

Major Requirements

Course Code	Title	Credits
MATH 151	Calculus I	4
MATH 152	Calculus II	4
MATH 253	Calculus III	4
MATH 271	Differential Equations	3
MATH 281	Foundations of Higher Mathematics	4
MATH 371	Linear Algebra	4
MATH 481	Modern Algebra	4
MATH 491	Advanced Calculus	4
	Sub-Total Credits	31

Elective Courses

Students complete 6 credit of elective mathematics courses numbered above 240. 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:

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](#) and [MATH 401](#).

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](#) and [MATH 461](#).

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](#) and [MATH 381](#). Students interested in business are also encouraged to complete the pre-MBA minor in the College of Business as part of Alfred University's 4+1 MBA program.

Course Code	Title	Credits
	Math courses numbered above 240	6
	Sub-Total Credits	6

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Mathematics majors complete 4 credits of quantitative reasoning as part of their degree program.

	Sub-Total Credits	48
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Mathematics BS

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.

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

Major Requirements

All major courses must be passed with a grade of C or better.

Course Code	Title	Credits
CSCI 156	Computer Science I	4
MATH 151	Calculus I	4
MATH 152	Calculus II	4
MATH 253	Calculus III	4
MATH 271	Differential Equations	3
MATH 281	Foundations of Higher Mathematics	4
MATH 371	Linear Algebra	4
MATH 381	Mathematical Statistics	4
MATH 481	Modern Algebra	4
MATH 491	Advanced Calculus	4
	11 credits of 300+ level Mathematics courses	11
	8 credit hours of natural and computer science courses	8
	Sub-Total Credits	58

Natural and computer science elective courses should be unique courses, which are not used to satisfy other graduation requirements.

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Mathematics majors complete 4 of quantitative reasoning requirements as part of their degree program.

	Sub-Total Credits	48
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)

- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Mathematics 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

Major Requirements

Course Code	Title	Credits
MATH 151	Calculus I	4
MATH 152	Calculus II	4
MATH 253	Calculus III	4
MATH 271	Differential Equations	3
MATH 281	Foundations of Higher Mathematics	4
MATH 371	Linear Algebra	4
MATH 481	Modern Algebra	4
MATH 491	Advanced Calculus	4
	Math courses numbered above 240	6
	Sub-Total Credits	37

	Total Credits	37
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Mathematics Minor

A mathematics minor allows students the opportunity to broaden their educational experience and enrich career possibilities. It pairs well with any discipline in which analytical, computational, or quantitative skills are important.

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.

Requirements for the minor in Mathematics:

Course Code	Title	Credits
MATH 151	Calculus I	4
MATH 152	Calculus II	4
MATH 253	Calculus III	4
	10 credit hours of mathematics courses numbered 200+	10
	Sub-Total Credits	22
	Total Credits	22

Mathematics with Actuarial Science BS

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.

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

Major Requirements

All major courses must be passed with a grade of C or better.

Course Code	Title	Credits
ACCT 211	Financial Accounting	3
ACCT 212	Managerial Accounting	3
CSCI 156	Computer Science I	4
ECON 201	Principles of Microeconomics	3
ECON 202	Principles of Macroeconomics	3
FIN 205	Student Managed Investment Fund	1
FIN 206	Student Managed Investment Fund Laboratory	1
FIN 348	Managerial Finance	3
MATH 151	Calculus I	4
MATH 152	Calculus II	4
MATH 253	Calculus III	4
MATH 271	Differential Equations	3
MATH 281	Foundations of Higher Mathematics	4
MATH 351	Introduction to Operations Research	4

MATH 371	Linear Algebra	4
MATH 381	Mathematical Statistics	4
MATH 382	Actuarial Exam Preparation	1
MATH 391	Statistical Methods	3
MATH 481	Modern Algebra	4
MATH 491	Advanced Calculus	4
Sub-Total Credits		64

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Mathematics with Actuarial Science majors complete 8 credits of quantitative reasoning and social science requirements as part of their degree program.

Sub-Total Credits	44
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Total Credits	124
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Modern Languages

Foreign Language and Culture Studies

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. 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.

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.

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

Chinese Language and Culture Minor

The Modern Languages Division offers a Chinese Language and Culture Minor. This minor allows students to gain advanced proficiency in Mandarin Chinese while gaining a broad understanding of Chinese culture. Language instruction will be conducted using Simplified Chinese.

All courses used to complete the Chinese Language and Culture Minor must have grades of “C” or higher.

Requirements for the Chinese Language and Culture Minor

Core courses: all of the following

(Prerequisites: [CHIN 101](#) and [CHIN 102](#) or equivalent)

Course Code	Title	Credits
CHIN 201	Chinese III	4
CHIN 202	Chinese IV	4
CHIN 301	Advanced Conversation & Comp I	4
Sub-Total Credits		12

Elective courses: choose 6 credits from among the following:

Course Code	Title	Credits
ARTH 304	Global Arts: Contemporary Asia	4
ARTH 307	East Asian Design and Material Culture	4
CHIN 302	Advanced Conversation and Composition - II	4
HIST 162	Modern East Asia: Japan China and Korea	4
HIST 358	Modern China	4
MUSC 133	Music of the Guzheng	2
MUSC 279	Chamber Music	1-2
RLGS 165	Asian Religions	4

	Sub-Total Credits	6
	Total Credits	18

Foreign Language and Culture Studies BA: French Concentration

Core courses

Course Code	Title	Credits
FREN 302	Advanced French Grammar and Composition I	4
FREN 490	Modern Languages Senior Seminar	0
	Sub-Total Credits	4

Major level French courses

Students must take at least 20 upper-level credits taught in French.

Course Code	Title	Credits
FREN 202	Intermediate French IV	4
FREN 208	Francophone Queer Voices	4
FREN 300	Special Topics	1-4
FREN 301	Advanced French Conversation	4
FREN 302	Advanced French Grammar and Composition I	4
FREN 305	French Pronunciation and Phonetics	2
FREN 310	Reading French Texts	4
FREN 311	French Literature I	4
FREN 316	Contemporary French Culture	4
FREN 400	Special Topics in French	1-4
FREN 420	The Art of French Translation	4
	Sub-Total Credits	20

Second Foreign Language

Minimum of 8 credits

	Sub-Total Credits	8
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Elective courses in related fields

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.

	Sub-Total Credits	12
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Note: 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.

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Foreign Language and Culture Studies majors complete 8-12 credits of general education credits through prerequisite courses or as part of their degree program.

	Sub-Total Credits	40-44
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Foreign Language and Culture Studies Double Major

Core courses

Course Code	Title	Credits
FREN 302	Advanced French Grammar and Composition I	4
FREN 490	Modern Languages Senior Seminar	0
	Sub-Total Credits	4

Major level French courses

Students must take at least 20 upper-level credits taught in French.

Course Code	Title	Credits
FREN 202	Intermediate French IV	4
FREN 208	Francophone Queer Voices	4
FREN 300	Special Topics	1-4
FREN 301	Advanced French Conversation	4
FREN 302	Advanced French Grammar and Composition I	4
FREN 305	French Pronunciation and Phonetics	2
FREN 310	Reading French Texts	4
FREN 311	French Literature I	4
FREN 316	Contemporary French Culture	4

FREN 400	Special Topics in French	1-4
FREN 420	The Art of French Translation	4
Sub-Total Credits		20

Second Foreign Language

Minimum of 8 credits

Sub-Total Credits		8
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Elective courses in related fields

Sub-Total Credits		12
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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.

Note: 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.

Total Credits	44
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French 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.

Requirements for the minor in French

(Prerequisites: [FREN 101](#), [FREN 102](#), [FREN 201](#) or equivalent)

Students wishing to minor in French take one required course:

Course Code	Title	Credits
FREN 302	Advanced French Grammar and Composition I	4
16+ credit hours above FREN 201		16

Select a minimum of 16 credit hours above FREN 201 (FREN 202 counts for the minor).

Sub-Total Credits		20
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Total Credits	20
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Spanish BA

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)

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

Required Courses

Course Code	Title	Credits
SPAN 301	Advanced Conversation and Composition	4
SPAN 311	Peninsular Culture and Literature I: Medieval - Eighteenth Century	4
SPAN 312	Peninsular Culture and Literature II: 19th - 20th Century	4
SPAN 315	Latin American Culture and Literature I	4
SPAN 316	Latin American Culture and Literature II	4
SPAN 360	Literary Theory Seminar	4
SPAN 490	Modern Languages Senior Seminar	0
Sub-Total Credits		24

Elective Courses

Choose 12 credit hours from:

Course Code	Title	Credits
SPAN 217	Exiled from Justice: Equatorial Guinean Writers in Africa and Spain	4
SPAN 220	Literatura Infantil y Juvenil	4
SPAN 300	Special Topics	1-4

SPAN 400	Topics in Hispanic Literature	1-4
SPAN 402	Readings in Modern Latin American Literature	4
SPAN 404	Latinos/as in the United States	4
SPAN 450	Independent Study	1-4
Sub-Total Credits		12

CLAS General Education Requirements

Complete remaining CLAS General Education requirements . Spanish majors complete 8-12 credits of general education requirements through program prerequisites or as part of their degree program.		
Sub-Total Credits		40-44

University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Total Credits	124
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Spanish Double Major

The Modern Languages Program offers a Spanish double major giving students a proficiency in speaking, listening, reading, and writing. Alfred students who complete a Spanish double 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.

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

Required Courses

Course Code	Title	Credits
SPAN 301	Advanced Conversation and Composition	4
SPAN 311	Peninsular Culture and Literature I: Medieval - Eighteenth Century	4
SPAN 312	Peninsular Culture and Literature II: 19th - 20th Century	4
SPAN 315	Latin American Culture and Literature I	4
SPAN 316	Latin American Culture and Literature II	4
SPAN 360	Literary Theory Seminar	4
SPAN 490	Modern Languages Senior Seminar	0
Sub-Total Credits		24

Elective Courses

Choose 12 credit hours from:

Course Code	Title	Credits
SPAN 217	Exiled from Justice: Equatorial Guinean Writers in Africa and Spain	4
SPAN 220	Literatura Infantil y Juvenil	4
SPAN 300	Special Topics	1-4
SPAN 400	Topics in Hispanic Literature	1-4
SPAN 402	Readings in Modern Latin American Literature	4
SPAN 404	Latinos/as in the United States	4
SPAN 450	Independent Study	1-4
Sub-Total Credits		12

	Total Credits	36
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Spanish 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.

Requirements for the minor in Spanish

(Prerequisites: [SPAN 101](#), [SPAN 102](#), [SPAN 201](#), or equivalent)

Course Code	Title	Credits
SPAN 301	Advanced Conversation and Composition	4
SPAN 311 or SPAN 312		4
SPAN 311	Peninsular Culture and Literature I: Medieval - Eighteenth Century	4
SPAN 312	Peninsular Culture and Literature II: 19th - 20th Century	4
SPAN 315 or SPAN 316		4
SPAN 315	Latin American Culture and Literature I	4

SPAN 316	Latin American Culture and Literature II	4
SPAN 360	Literary Theory Seminar	4
Sub-Total Credits		16

Choose 4 credit hours from

Course Code	Title	Credits
SPAN 202	Intermediate Spanish IV	4
SPAN 400	Topics in Hispanic Literature	1-4
SPAN 450	Independent Study	1-4
Sub-Total Credits		4

Total Credits	20
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Physics and Astronomy

Physics and Astronomy

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.

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.

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.

Astronomy Minor

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

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

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.

A. Take one of the following courses:

Course Code	Title	Credits
PHYS 111	Introductory General Physics I	4
PHYS 125	Physics I	4
Sub-Total Credits		4

B. Take 4 credits from the following.

[ASTR 104](#) or [ASTR 107](#) must be one of the selected courses.

Course Code	Title	Credits
ASTR 104	Observational Astronomy	4
ASTR 105	Solar Systems	2
ASTR 106	Stars Galaxies and Cosmology	2
ASTR 107	Elementary Astronomy Lab	2
Sub-Total Credits		4

C. Take 6 credits from the following

Course Code	Title	Credits
ASTR 302	Planetary Science	3
ASTR 303	Stellar Astronomy	3
ASTR 304	Galactic Astronomy and Cosmology	3
ASTR 307	Advanced Astronomy Laboratory	3
Sub-Total Credits		6

	Total Credits	14
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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. 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 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.

Core Requirements

Introductory and Intermediate Courses:

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

Upper Level Courses

Course Code	Title	Credits
ASTR 302	Planetary Science	3
ASTR 303	Stellar Astronomy	3
ASTR 304	Galactic Astronomy and Cosmology	3
PHYS 401	Quantum Mechanics I	3
PHYS 421	Statistical Mechanics	4
PHYS 423	Classical Mechanics	4
PHYS 424	Electricity and Magnetism I	3
Sub-Total Credits		42

Electives and Independent Study:

Astrophysics majors are expected to complete at least 6 credits of Physics and Astronomy courses at the 300-level or above, and at least 2 credits of ASTR 450 Independent Study.

Course Code	Title	Credits
	Physics and Astronomy courses at or above the 300 level	6
ASTR 450	Independent Study	1-4
	Sub-Total Credits	8

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.

Course Code	Title	Credits
CSCI 156	Computer Science I	4
MATH 151	Calculus I	4
MATH 152	Calculus II	4
MATH 253	Calculus III	4

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Astrophysics majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

	Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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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.

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.

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.

Core requirements

Introductory and Intermediate Courses:

Course Code	Title	Credits
PHYS 125	Physics I	4
PHYS 126	Physics II	4
PHYS 324	Mathematical Methods in Physics	3
PHYS 325	Elementary Optics	3
PHYS 326	Elementary Modern Physics	3
ASTR 307	Advanced Astronomy Laboratory	3
Sub-Total Credits		20

Upper Level Courses:

Choose 3 of the following 4 courses:

Course Code	Title	Credits
PHYS 401	Quantum Mechanics I	3
PHYS 421	Statistical Mechanics	4
PHYS 423	Classical Mechanics	4
PHYS 424	Electricity and Magnetism I	3
Sub-Total Credits		10-11

Elective requirements

Complete a minimum of 8 credits from the list below:

Course Code	Title	Credits
Astronomy courses at or above the 300 level not required above		
ASTR 302	Planetary Science	3
ASTR 303	Stellar Astronomy	3
ASTR 304	Galactic Astronomy and Cosmology	3
Sub-Total Credits		8

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.

Course Code	Title	Credits
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MATH 151	Calculus I	4
MATH 152	Calculus II	4
MATH 253	Calculus III	4
Total Credits		38-39

Physics BA: Astrophysics Concentration

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.

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

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 [Astrophysics](#), [Mechanical Systems](#), [Solid State Physics](#), [Theoretical Physics](#), and [General Physics](#).

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.

Core Requirements for the Major

Introductory and Intermediate Courses:

Course Code	Title	Credits
PHYS 125	Physics I	4
PHYS 126	Physics II	4
PHYS 324	Mathematical Methods in Physics	3
PHYS 325	Elementary Optics	3
PHYS 326	Elementary Modern Physics	3
PHYS 341	Advanced Physics Laboratory	3
Sub-Total Credits		20

Upper Level Courses:

Choose 3 of the following 4 courses:

Course Code	Title	Credits
PHYS 401	Quantum Mechanics I	3

PHYS 421	Statistical Mechanics	4
PHYS 423	Classical Mechanics	4
PHYS 424	Electricity and Magnetism I	3
Sub-Total Credits		10-11

Astrophysics Concentration

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

Course Code	Title	Credits
ASTR 302	Planetary Science	3
ASTR 303	Stellar Astronomy	3
ASTR 304	Galactic Astronomy and Cosmology	3
ASTR 307	Advanced Astronomy Laboratory	3
Sub-Total Credits		8

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.

Course Code	Title	Credits
MATH 151	Calculus I	4
MATH 152	Calculus II	4
MATH 253	Calculus III	4

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Physics majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Total Credits	124
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Physics BA: General Physics Concentration

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.

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

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 [Astrophysics](#), [Mechanical Systems](#), [Solid State Physics](#), [Theoretical Physics](#), and [General Physics](#).

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.

Core Requirements for the Major

Introductory and Intermediate Courses:

Course Code	Title	Credits
PHYS 125	Physics I	4
PHYS 126	Physics II	4
PHYS 324	Mathematical Methods in Physics	3
PHYS 325	Elementary Optics	3
PHYS 326	Elementary Modern Physics	3
PHYS 341	Advanced Physics Laboratory	3
Sub-Total Credits		20

Upper Level Courses:

Choose 3 of the following 4 courses:

Course Code	Title	Credits
PHYS 401	Quantum Mechanics I	3
PHYS 421	Statistical Mechanics	4
PHYS 423	Classical Mechanics	4
PHYS 424	Electricity and Magnetism I	3
Sub-Total Credits		10-11

General Physics Concentration

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.

Astrophysics Courses:

Course Code	Title	Credits
ASTR 302	Planetary Science	3
ASTR 303	Stellar Astronomy	3
ASTR 304	Galactic Astronomy and Cosmology	3
ASTR 307	Advanced Astronomy Laboratory	3

Mechanical Systems Courses:

Course Code	Title	Credits
MECH 321	Thermodynamics II	3
MECH 324	Fluid Mechanics I	3
MECH 415	Mechanical Vibrations I	3
MECH 424	Fluid Mechanics II	3

Solid State Physics Courses:

Course Code	Title	Credits
CEMS 344	Properties II: Electrical Magnetic and Optical	4
CEMS 347	Spectroscopy	2
CEMS 349	X-ray Characterization	2
CEMS 501	Solid State Physics	3
PHYS 408	Physics of Glass	4

Theoretical Physics Courses:

Course Code	Title	Credits
PHYS 402	Quantum Mechanics II	3
PHYS 405	General Relativity	4
PHYS 410	Particle Physics	4
PHYS 454	Electricity & Magnetism II	3
	Sub-Total Credits	8

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.

Course Code	Title	Credits
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MATH 151	Calculus I	4
MATH 152	Calculus II	4
MATH 253	Calculus III	4

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Physics majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

	Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Physics BA: Mechanical Systems Concentration

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.

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

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 [Astrophysics](#), [Mechanical Systems](#), [Solid State Physics](#), [Theoretical Physics](#), and [General Physics](#).

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.

Core Requirements for the Major

Introductory and Intermediate Courses:

Course Code	Title	Credits
PHYS 125	Physics I	4
PHYS 126	Physics II	4
PHYS 324	Mathematical Methods in Physics	3
PHYS 325	Elementary Optics	3
PHYS 326	Elementary Modern Physics	3
PHYS 341	Advanced Physics Laboratory	3
Sub-Total Credits		20

Upper Level Courses:

Choose 3 of the following 4 courses:

Course Code	Title	Credits
PHYS 401	Quantum Mechanics I	3
PHYS 421	Statistical Mechanics	4
PHYS 423	Classical Mechanics	4
PHYS 424	Electricity and Magnetism I	3
Sub-Total Credits		10-11

Mechanical Systems Concentration

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:

Course Code	Title	Credits
MECH 321	Thermodynamics II	3
MECH 324	Fluid Mechanics I	3
MECH 415	Mechanical Vibrations I	3
MECH 424	Fluid Mechanics II	3
Sub-Total Credits		8

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.

Course Code	Title	Credits
MATH 151	Calculus I	4
MATH 152	Calculus II	4
MATH 253	Calculus III	4

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Physics majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

	Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Physics BA: Solid State Physics Concentration

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

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 [Astrophysics](#), [Mechanical Systems](#), [Solid State Physics](#), [Theoretical Physics](#), and [General Physics](#).

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.

Core Requirements for the Major

Introductory and Intermediate Courses:

Course Code	Title	Credits
PHYS 125	Physics I	4

PHYS 126	Physics II	4
PHYS 324	Mathematical Methods in Physics	3
PHYS 325	Elementary Optics	3
PHYS 326	Elementary Modern Physics	3
PHYS 341	Advanced Physics Laboratory	3
Sub-Total Credits		20

Upper Level Courses:

Choose 3 of the following 4 courses:

Course Code	Title	Credits
PHYS 401	Quantum Mechanics I	3
PHYS 421	Statistical Mechanics	4
PHYS 423	Classical Mechanics	4
PHYS 424	Electricity and Magnetism I	3
Sub-Total Credits		10-11

Solid State Physics Concentration

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:

Course Code	Title	Credits
CEMS 344	Properties II: Electrical Magnetic and Optical	4
CEMS 347	Spectroscopy	2
CEMS 349	X-ray Characterization	2
CEMS 501	Solid State Physics	3
PHYS 408	Physics of Glass	4
Sub-Total Credits		8

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.

Course Code	Title	Credits
MATH 151	Calculus I	4
MATH 152	Calculus II	4
MATH 253	Calculus III	4

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Physics majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

	Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Physics BA: Theoretical Physics Concentration

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

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 [Astrophysics](#), [Mechanical Systems](#), [Solid State Physics](#), [Theoretical Physics](#), and [General Physics](#).

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.

Core Requirements for the Major

Introductory and Intermediate Courses:

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

	Sub-Total Credits	20
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Upper Level Courses:

Choose 3 of the following 4 courses:

Course Code	Title	Credits
PHYS 401	Quantum Mechanics I	3
PHYS 421	Statistical Mechanics	4
PHYS 423	Classical Mechanics	4
PHYS 424	Electricity and Magnetism I	3
	Sub-Total Credits	10-11

Theoretical Physics Concentration

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

Course Code	Title	Credits
PHYS 402	Quantum Mechanics II	3
PHYS 405	General Relativity	4
PHYS 410	Particle Physics	4
PHYS 454	Electricity & Magnetism II	3
	Sub-Total Credits	8

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.

Course Code	Title	Credits
MATH 151	Calculus I	4
MATH 152	Calculus II	4
MATH 253	Calculus III	4

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Physics majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program.

	Sub-Total Credits	40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)

- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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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. 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 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.

Core Requirements for the Major

Introductory and Intermediate Courses:

Course Code	Title	Credits
PHYS 125	Physics I	4
PHYS 126	Physics II	4
PHYS 324	Mathematical Methods in Physics	3
PHYS 325	Elementary Optics	3
PHYS 326	Elementary Modern Physics	3
PHYS 327	Computational Physics	3
PHYS 341	Advanced Physics Laboratory	3
	Sub-Total Credits	23

Upper Level Courses:

Course Code	Title	Credits
PHYS 401	Quantum Mechanics I	3
PHYS 402	Quantum Mechanics II	3
PHYS 421	Statistical Mechanics	4
PHYS 423	Classical Mechanics	4

PHYS 424	Electricity and Magnetism I	3
PHYS 454	Electricity & Magnetism II	3
Sub-Total Credits		20

Electives and Independent Study:

Physics majors are expected to complete at least 6 credits of Physics and Astronomy courses at the 300-level or above, and at least 2 credits of PHYS 450 Independent Study

Course Code	Title	Credits
Physics and Astronomy courses at or above the 300 level		6
PHYS 450	Independent Study	1-4
Sub-Total Credits		8

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.

Course Code	Title	Credits
CSCI 156	Computer Science I	4
MATH 151	Calculus I	4
MATH 152	Calculus II	4
MATH 253	Calculus III	4
MATH 271	Differential Equations	3
MATH 371	Linear Algebra	4

CLAS General Education Requirements

Complete remaining [CLAS General Education](#) requirements. Physics majors complete 12 credits of quantitative reasoning and natural science requirements as part of their degree program

Sub-Total Credits		40
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Total Credits	124
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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.

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.

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.

Core Requirements for the major

Introductory and Intermediate Courses:

Course Code	Title	Credits
PHYS 125	Physics I	4
PHYS 126	Physics II	4
PHYS 324	Mathematical Methods in Physics	3
PHYS 325	Elementary Optics	3
PHYS 326	Elementary Modern Physics	3
PHYS 341	Advanced Physics Laboratory	3
Sub-Total Credits		20

Upper Level Courses:

Choose 3 of the following 4 courses:

Course Code	Title	Credits
PHYS 401	Quantum Mechanics I	3
PHYS 421	Statistical Mechanics	4
PHYS 423	Classical Mechanics	4
PHYS 424	Electricity and Magnetism I	3
Sub-Total Credits		10-11

Electives:

Complete a minimum of 8 credits from the list below:

Course Code	Title	Credits
Physics course at or above the 300 level not required above		

Astronomy courses at or above the 300 level		
MECH 321	Thermodynamics II	3
MECH 324	Fluid Mechanics I	3
MECH 415	Mechanical Vibrations I	3
CEMS 344	Properties II: Electrical Magnetic and Optical	4
CEMS 347	Spectroscopy	2
CEMS 501	Solid State Physics	3
Sub-Total Credits		8

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.

Course Code	Title	Credits
MATH 151	Calculus I	4
MATH 152	Calculus II	4
MATH 253	Calculus III	4

Total Credits	38-39
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Physics 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.

Requirements

Course Code	Title	Credits
PHYS 125	Physics I	4
PHYS 126	Physics II	4
PHYS 325	Elementary Optics	3
PHYS 326	Elementary Modern Physics	3
Physics Electives (300 level or above)		8
Sub-Total Credits		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.

Total Credits	22
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Planetary Science Minor

The minor in Planetary Science is offered by the Division of Environmental Studies/Geology and the Division of Physics/Astronomy. A student will have met the requirements for the minor after completing ASTR 302 and 12 credit hours of electives chosen from the courses below with a grade of C or better in each course. At least six credit hours must be 200-level or above.

Required Course

Course Code	Title	Credits
ASTR 302	Planetary Science	3
Sub-Total Credits		3

Select 12 credit hours from the following:

Course Code	Title	Credits
ASTR 103	Introductory Astronomy	4
ASTR 107	Elementary Astronomy Lab	2
ASTR 307	Advanced Astronomy Laboratory	3
GEOL 101	This Dynamic Earth	4
GEOL 201	Surficial Geology	4
GEOL 408	Tectonics	4
Sub-Total Credits		12

ASTR 302, ASTR 307: These courses have prerequisites. See course descriptions.

	Total Credits	15
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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 and Adolescent Development concentration provides opportunities to focus on various aspects of development from infancy through young adulthood, including social and cognitive development, parenting, developmental disorders, and adverse and protective experiences. Students are required to complete an internship or practicum. This option prepares students for graduate study or employment in fields with children, teens, and/or emerging adults.

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. We offer pre-preprofessional pathway for those wishing to pursue a Master’s Degree in Art Therapy..

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

Biopsychology Minor

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.

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.

Requirements For The Biopsychology Minor

Core Courses

Course Code	Title	Credits
BIOL 211	Cell Biology	4
BIOL 307	Anatomy and Physiology: Nerves Muscles Skeleton	4
PSYC 270	Fundamentals of Neuropsychology	4
PSYC 280	Applied Neuropsychology	2-4
Sub-Total Credits		14

Complete one of the following:

Course Code	Title	Credits
BIOL 130	Introduction to Human Genetics	4
BIOL 212	Principles of Genetics	4
Sub-Total Credits		4

Complete one of the following:

Course Code	Title	Credits
PSYC 311	Sensation and Perception	4
PSYC 322	Health Psychology	2-4
Sub-Total Credits		4

Advanced Application

Take 4 credit hours from the following:

Course Code	Title	Credits
BIPY 485	Practicum or Internship	1-4
BIPY 499	Thesis	1-4
Sub-Total Credits		4

	Total Credits	26
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Gerontology BA

Our nation is “graying” at a dramatic rate. In 2023, seniors aged 65+ comprised nearly 18% of the U.S. population, estimated to be around 59 million people. By 2050, this number will jump to about 23% - almost 1 out of every 4 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.

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.

Major Requirements

Complete all of the following:

Course Code	Title	Credits
GERO 118	Introduction to Adult Development and Aging	4
BIOL 119	Physiology of Aging	4
PSYC 210	Communication and Counseling Skills	2
PSYC 371	The Psychology of Death and Dying	4
GERO 429	Cognition and Aging	2
GERO 485	Gerontology Internship	4
SOCI 348	Sociology of Families	4
Sub-Total Credits		24

Select one course from each of the following three groups:

Group I

Course Code	Title	Credits
PSYC 221	Psychological Research Methods and Statistics I	4
SOCI 230	Introduction to Data Analysis and Statistics	4
Sub-Total Credits		4

Group II

Course Code	Title	Credits
SOCI 253	Social Welfare Institutions	4
POLS 355	Public Policy	4
PSYC 322	Health Psychology	2-4
Sub-Total Credits		4

Group III

Course Code	Title	Credits
GERO 300	Special Topics in Gerontology	2-4
GERO 450	Independent Study	1-4
SOCI 470	Application of Sociology Field Work	2-4

	Sub-Total Credits	4
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CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Gerontology majors complete 16 credits of quantitative reasoning, natural science, and social science requirements as part of their degree program.

	Sub-Total Credits	36
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Gerontology 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.

Requirements for the minor in Gerontology

Complete all of the following:

Course Code	Title	Credits
GERO 118	Introduction to Adult Development and Aging	4
GERO 429	Cognition and Aging	2
GERO 485	Gerontology Internship	4
	Sub-Total Credits	10

Complete one course from each of the following four groups:

Group 1

Course Code	Title	Credits
BIOL 119	Physiology of Aging	4
PSYC 322	Health Psychology	2-4
	Sub-Total Credits	2-4

Group 2

Course Code	Title	Credits
PSYC 210	Communication and Counseling Skills	2
PSYC 371	The Psychology of Death and Dying	4
Sub-Total Credits		2-4

Group 3

Course Code	Title	Credits
GERO 300	Special Topics in Gerontology	2-4
Sub-Total Credits		2-4

Group 4

Course Code	Title	Credits
SOCI 253	Social Welfare Institutions	4
SOCI 348	Sociology of Families	4
POLS 355	Public Policy	4
PSYC 450	Independent Study	1-4
Sub-Total Credits		1-4

	Total Credits	20
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Pre-Art Therapy Graduate Prerequisite Plan

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:

Studio Art Work Courses

Complete a minimum of 18 credit hours of Studio Art work.

	Sub-Total Credits	18
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Portfolio

Prepare a portfolio of original art work demonstrating competence with art materials.

Required Psychology Courses

Complete a *minimum* of 12 credit hours in Psychology.

Course Code	Title	Credits
PSYC 101	Introduction to Psychology	4

	PSYC 263 or PSYC 264	4
PSYC 342	Psychopathology	4
	Sub-Total Credits	12

Additional Psychology Courses

In consultation with practicing art therapists, we *recommend* the following psychology courses:

Course Code	Title	Credits
PSYC 389	Introduction to Art Therapy	3
PSYC 210	Communication and Counseling Skills	2
PSYC 251	Principles of Learning and Behavior Modification	4
PSYC 302	Psychological Measurement	2-4
PSYC 341	Theories of Personality	4
PSYC 491	Clinical Procedures	4
PSYC 492	Clinical Practicum	4
PSYC 343	Child & Adolescent Mental Health	4
	Sub-Total Credits	27-29
	Total Credits	57-59

Psychology BA: Child & Adolescent Development Concentration

Psychology Foundational Core

Course Code	Title	Credits
PSYC 101	Introduction to Psychology	4
PSYC 221	Psychological Research Methods and Statistics I	4
PSYC 222	Psychological Research Methods and Statistics II	4
PSYC 310	Professional Preparation in Psychology	2
PSYC 497	Senior Seminar	2
	Sub-Total Credits	16

Child & Adolescent Development Core

Biological

Course Code	Title	Credits
PSYC 270	Fundamentals of Neuropsychology	4
PSYC 280	Applied Neuropsychology	2-4
	Sub-Total Credits	6

Learning and Cognitive Processes

Choose one:

Course Code	Title	Credits
PSYC 251	Principles of Learning and Behavior Modification	4
PSYC 311	Sensation and Perception	4
PSYC 332	Cognitive Processes	4
Sub-Total Credits		4

Developmental

Take both:

Course Code	Title	Credits
PSYC 263	Infant & Child Development	4
PSYC 264	Adolescent & Young Adult Development	4
Sub-Total Credits		8

Social and Personality

Choose one:

Course Code	Title	Credits
PSYC 273	Psychology of the African American Experience	2-4
PSYC 282	Social Psychology	4
PSYC 341	Theories of Personality	4
PSYC 372	Psychology of Gender	4
Sub-Total Credits		4

Mental and Physical Health

Choose one:

Course Code	Title	Credits
PSYC 210	Communication and Counseling Skills	2
PSYC 322	Health Psychology	2-4
PSYC 331	Counseling substance use and addictions	4
PSYC 342	Psychopathology	4
PSYC 351	Human Sexuality	4
PSYC 371	The Psychology of Death and Dying	4
Sub-Total Credits		2-4

Child & Adolescent Development Specific Courses

Course Code	Title	Credits
PSYC 320	Parenting Seminar	2-3
PSYC 340	Adverse & Protective Childhood	2-3

PSYC 343	Child & Adolescent Mental Health	4
	PSYC 485 or 492	4
	Sub-Total Credits	11

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Psychology majors complete 8 credits of quantitative reasoning and social science requirements as part of their degree program.

Sub-Total Credits	44
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Total Credits	124
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Psychology BA: Clinical/Counseling Psychology Concentration

Psychology Foundational Core

Course Code	Title	Credits
PSYC 101	Introduction to Psychology	4
PSYC 221	Psychological Research Methods and Statistics I	4
PSYC 222	Psychological Research Methods and Statistics II	4
PSYC 310	Professional Preparation in Psychology	2
PSYC 497	Senior Seminar	2
	Sub-Total Credits	16

Clinical/Counseling Psychology Core

Biological

Course Code	Title	Credits
PSYC 270	Fundamentals of Neuropsychology	4
PSYC 280	Applied Neuropsychology	2-4
	Sub-Total Credits	6

Learning and Cognitive Processes

Choose one:

Course Code	Title	Credits
PSYC 251	Principles of Learning and Behavior Modification	4
PSYC 311	Sensation and Perception	4
PSYC 332	Cognitive Processes	4
	Sub-Total Credits	4

Developmental

Choose one:

Course Code	Title	Credits
PSYC 118	Introduction to Adult Development and Aging	4
PSYC 263	Infant & Child Development	4
PSYC 264	Adolescent & Young Adult Development	4
PSYC 340	Adverse & Protective Childhood	2-3
	Sub-Total Credits	4

Social and Personality

Choose one:

Course Code	Title	Credits
PSYC 273	Psychology of the African American Experience	2-4
PSYC 341	Theories of Personality	4
PSYC 372	Psychology of Gender	4
PSYC 282	Social Psychology	4
	Sub-Total Credits	4

Mental and Physical Health

Clinical/Counseling Psychology Concentration students fulfill this category through concentration specific electives.

Course Code	Title	Credits
PSYC 322	Health Psychology	2-4
PSYC 331	Counseling substance use and addictions	4
PSYC 343	Child & Adolescent Mental Health	4
PSYC 351	Human Sexuality	4
PSYC 371	The Psychology of Death and Dying	4

Clinical/Counseling Psychology Specific Courses

Take all:

Course Code	Title	Credits
PSYC 210	Communication and Counseling Skills	2
PSYC 342	Psychopathology	4
PSYC 491	Clinical Procedures	4
PSYC 492	Clinical Practicum	4
Sub-Total Credits		14

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Psychology majors complete 8 credits of quantitative reasoning and social science requirements as part of their degree program.

Sub-Total Credits	44
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Total Credits	124
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Psychology BA: Equine Assisted Psychotherapy Concentration

Psychology Foundational Core

Course Code	Title	Credits
PSYC 101	Introduction to Psychology	4
PSYC 221	Psychological Research Methods and Statistics I	4
PSYC 222	Psychological Research Methods and Statistics II	4
PSYC 310	Professional Preparation in Psychology	2
PSYC 497	Senior Seminar	2
Sub-Total Credits		16

Equine Assisted Psychotherapy Core

Biological

Course Code	Title	Credits
PSYC 270	Fundamentals of Neuropsychology	4

PSYC 280	Applied Neuropsychology	2-4
	Sub-Total Credits	6

Learning and Cognitive Processes

Course Code	Title	Credits
PSYC 251	Principles of Learning and Behavior Modification	4
	Sub-Total Credits	4

Developmental

Choose one:

Course Code	Title	Credits
PSYC 263	Infant & Child Development	4
PSYC 264	Adolescent & Young Adult Development	4
PSYC 340	Adverse & Protective Childhood	2-3
	Sub-Total Credits	4

Social and Personality

Choose one:

Course Code	Title	Credits
PSYC 282	Social Psychology	4
PSYC 341	Theories of Personality	4
PSYC 372	Psychology of Gender	4
	Sub-Total Credits	4

Mental and Physical Health

Course Code	Title	Credits
PSYC 210	Communication and Counseling Skills	2
	PSYC 342 or PSYC 343	4
	Sub-Total Credits	6

Equine Assisted Therapy Specific Courses

Course Code	Title	Credits
EQUUS 230	Fundamentals of Equine Husbandry	2
EQUUS 330	Advanced Equine Husbandry	4
EQUUS 331	Equine Behavior	4
PSYC 381	Animal-Assisted Therapy	3
PSYC 382	Equine-Assit. Psychotherapy	3
PSYC 485	Practicum	2-4

	Sub-Total Credits	18-20
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Equine Specialist Capstone

In order to become certified as an Equine Specialist, students must complete either the Fundamentals of the EAGALA Model Training Course or the PATH training course. This 40-hour, 5-day in-person course provides hands-on training, discussions, demonstrations, and experiences. Students will learn and put into practice the framework and standards of the certifying models, learn how to structure sessions, and be introduced to a variety of different process skillsets that will enable them to seek employment as an Equine Specialist.

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Psychology majors complete 8 credits of quantitative reasoning and social science requirements as part of their degree program.

	Sub-Total Credits	44
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Psychology BA: Experimental Psychology Concentration

Psychology Foundational Core

Course Code	Title	Credits
PSYC 101	Introduction to Psychology	4
PSYC 221	Psychological Research Methods and Statistics I	4
PSYC 222	Psychological Research Methods and Statistics II	4
PSYC 310	Professional Preparation in Psychology	2
PSYC 497	Senior Seminar	2
Sub-Total Credits		16

Experimental Psychology Core

Biological

Course Code	Title	Credits
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PSYC 270	Fundamentals of Neuropsychology	4
PSYC 280	Applied Neuropsychology	2-4
	Sub-Total Credits	6

Learning and Cognitive Processes

Choose two:

Course Code	Title	Credits
PSYC 251	Principles of Learning and Behavior Modification	4
PSYC 311	Sensation and Perception	4
PSYC 332	Cognitive Processes	4
	Sub-Total Credits	8

Developmental

Choose one:

Course Code	Title	Credits
PSYC 118	Introduction to Adult Development and Aging	4
PSYC 263	Infant & Child Development	4
PSYC 264	Adolescent & Young Adult Development	4
PSYC 340	Adverse & Protective Childhood	2-3
	Sub-Total Credits	4

Social and Personality

Choose one:

Course Code	Title	Credits
PSYC 273	Psychology of the African American Experience	2-4
PSYC 282	Social Psychology	4
PSYC 341	Theories of Personality	4
PSYC 372	Psychology of Gender	4
	Sub-Total Credits	4

Mental and Physical Health

Choose one:

Course Code	Title	Credits
PSYC 210	Communication and Counseling Skills	2
PSYC 322	Health Psychology	2-4
PSYC 331	Counseling substance use and addictions	4
PSYC 342	Psychopathology	4

PSYC 343	Child & Adolescent Mental Health	4
PSYC 351	Human Sexuality	4
PSYC 371	The Psychology of Death and Dying	4
Sub-Total Credits		4

Experimental Psychology Specific Courses

Take all:

Course Code	Title	Credits
PSYC 411	Advanced Psychological Research Methods and Statistics	4
PSYC 412	Research Practicum	4
Sub-Total Credits		8

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Psychology majors complete 8 credits of quantitative reasoning and social science requirements as part of their degree program.

Sub-Total Credits	54
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Total Credits	124
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Psychology BA: General Psychology Concentration

Psychology Foundational Core

Course Code	Title	Credits
PSYC 101	Introduction to Psychology	4
PSYC 221	Psychological Research Methods and Statistics I	4
PSYC 222	Psychological Research Methods and Statistics II	4
PSYC 310	Professional Preparation in Psychology	2
PSYC 497	Senior Seminar	2
Sub-Total Credits		16

General Psychology Concentration Core

Biological

Course Code	Title	Credits
PSYC 270	Fundamentals of Neuropsychology	4
PSYC 280	Applied Neuropsychology	2-4
Sub-Total Credits		6

Learning and Cognitive Processes

Choose one:

Course Code	Title	Credits
PSYC 251	Principles of Learning and Behavior Modification	4
PSYC 311	Sensation and Perception	4
PSYC 332	Cognitive Processes	4
Sub-Total Credits		4

Developmental

Choose one:

Course Code	Title	Credits
PSYC 118	Introduction to Adult Development and Aging	4
PSYC 263	Infant & Child Development	4
PSYC 264	Adolescent & Young Adult Development	4
PSYC 340	Adverse & Protective Childhood	2-3
Sub-Total Credits		4

Social and Personality

Choose one:

Course Code	Title	Credits
PSYC 273	Psychology of the African American Experience	2-4
PSYC 282	Social Psychology	4
PSYC 341	Theories of Personality	4
PSYC 372	Psychology of Gender	4
Sub-Total Credits		4

Mental and Physical Health

Choose one:

Course Code	Title	Credits
PSYC 210	Communication and Counseling Skills	2

PSYC 322	Health Psychology	2-4
PSYC 331	Counseling substance use and addictions	4
PSYC 342	Psychopathology	4
PSYC 343	Child & Adolescent Mental Health	4
PSYC 351	Human Sexuality	4
PSYC 371	The Psychology of Death and Dying	4
Sub-Total Credits		4

Content Group Electives

Select additional electives from the content groups

CLAS General Education Requirements

Complete remaining CLAS General Education requirements. Psychology majors complete 8 credits of quantitative reasoning and social science requirements as part of their degree program.

Sub-Total Credits	54
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Total Credits	124
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Psychology BA: Industrial/Organizational Psychology Concentration

Psychology Foundational Core

Course Code	Title	Credits
PSYC 101	Introduction to Psychology	4
PSYC 221	Psychological Research Methods and Statistics I	4
PSYC 222	Psychological Research Methods and Statistics II	4
PSYC 310	Professional Preparation in Psychology	2
PSYC 497	Senior Seminar	2
Sub-Total Credits		16

Industrial/Organizational Psychology Concentration Core

Biological

Course Code	Title	Credits
PSYC 270	Fundamentals of Neuropsychology	4
PSYC 280	Applied Neuropsychology	2-4
	Sub-Total Credits	6

Learning and Cognitive Processes

Choose one:

Course Code	Title	Credits
PSYC 251	Principles of Learning and Behavior Modification	4
PSYC 311	Sensation and Perception	4
PSYC 332	Cognitive Processes	4
	Sub-Total Credits	4

Developmental

Course Code	Title	Credits
PSYC 118	Introduction to Adult Development and Aging	4
	Sub-Total Credits	4

Social and Personality

Course Code	Title	Credits
PSYC 282	Social Psychology	4
	Sub-Total Credits	4

Mental and Physical Health

Choose one:

Course Code	Title	Credits
PSYC 210	Communication and Counseling Skills	2
PSYC 322	Health Psychology	2-4
PSYC 342	Psychopathology	4
PSYC 351	Human Sexuality	4
PSYC 371	The Psychology of Death and Dying	4
	Sub-Total Credits	4

Industrial/Organizational Psychology Concentration Specific Courses

Course Code	Title	Credits
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PSYC 302	Psychological Measurement	2-4
PSYC 362	Industrial/Organizational Psychology	4
Sub-Total Credits		6-8

Complete 9 credit hours from the following:

Course Code	Title	Credits
MGMT 305	Gender and Organizations	3
MGMT 318	Gender Equity in Business	3
MGMT 328	Management and Organizational Behavior	3
MGMT 472	Human Resource Management	3
MGMT 484	Operations Management	3
MKTG 221	Marketing Principles and Management	3
MKTG 379	Consumer Behavior	3
MKTG 382	Sales Marketing	3
MKTG 452	Market Research	3
Sub-Total Credits		9

Note: [MGMT 328](#), [MGMT 484](#), [MKTG 221](#) may be applied toward the Business Administration minor. Complete this minor to be eligible for the 4+1 Psychology + MBA program.

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Psychology majors complete 8 credits of quantitative reasoning and social science requirements as part of their degree program.

Sub-Total Credits	54
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Total Credits	124
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Psychology Double Major

Psychology Foundational Core

Course Code	Title	Credits
PSYC 101	Introduction to Psychology	4
PSYC 221	Psychological Research Methods and Statistics I	4
PSYC 222	Psychological Research Methods and Statistics II	4
PSYC 310	Professional Preparation in Psychology	2
PSYC 497	Senior Seminar	2
Sub-Total Credits		16

General Psychology Concentration Core

Biological

Course Code	Title	Credits
PSYC 270	Fundamentals of Neuropsychology	4
PSYC 280	Applied Neuropsychology	2-4
Sub-Total Credits		6

Learning and Cognitive Processes

Choose one:

Course Code	Title	Credits
PSYC 251	Principles of Learning and Behavior Modification	4
PSYC 311	Sensation and Perception	4
PSYC 332	Cognitive Processes	4
Sub-Total Credits		4

Developmental

Choose one:

Course Code	Title	Credits
PSYC 118	Introduction to Adult Development and Aging	4
PSYC 263	Infant & Child Development	4
PSYC 264	Adolescent & Young Adult Development	4
PSYC 340	Adverse & Protective Childhood	2-3
Sub-Total Credits		2-4

Social and Personality

Choose one:

Course Code	Title	Credits
PSYC 273	Psychology of the African American Experience	2-4
PSYC 282	Social Psychology	4
PSYC 341	Theories of Personality	4
PSYC 372	Psychology of Gender	4
Sub-Total Credits		2-4

Mental and Physical Health

Choose one:

Course Code	Title	Credits
PSYC 210	Communication and Counseling Skills	2
PSYC 322	Health Psychology	2-4
PSYC 331	Counseling substance use and addictions	4
PSYC 342	Psychopathology	4
PSYC 343	Child & Adolescent Mental Health	4
PSYC 351	Human Sexuality	4
PSYC 371	The Psychology of Death and Dying	4
Sub-Total Credits		2-4

Content Group Electives

Select additional electives from the content groups to complete a total of 44 credits.

	Total Credits	44
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Psychology 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.

Requirements for the minor in Psychology

Foundational Core (take all; 8 credit hours)

Course Code	Title	Credits
PSYC 101	Introduction to Psychology	4
PSYC 221	Psychological Research Methods and Statistics I	4
Sub-Total Credits		8

Biological, Learning and Cognitive Processes (4 credit hours)

Course Code	Title	Credits
PSYC 251	Principles of Learning and Behavior Modification	4

PSYC 270	Fundamentals of Neuropsychology	4
PSYC 280	Applied Neuropsychology	2-4
PSYC 311	Sensation and Perception	4
PSYC 332	Cognitive Processes	4
PSYC 429	Cognition and Aging	2
Sub-Total Credits		4

Developmental (4 credit hours)

Course Code	Title	Credits
PSYC 118	Introduction to Adult Development and Aging	4
PSYC 263	Infant & Child Development	4
PSYC 264	Adolescent & Young Adult Development	4
PSYC 340	Adverse & Protective Childhood	2-3
Sub-Total Credits		4

Social and Personality (Choose one)

Course Code	Title	Credits
PSYC 273	Psychology of the African American Experience	2-4
PSYC 282	Social Psychology	4
PSYC 341	Theories of Personality	4
PSYC 372	Psychology of Gender	4
Sub-Total Credits		4

Mental and Physical Health (Choose one)

Course Code	Title	Credits
PSYC 210	Communication and Counseling Skills	2
PSYC 322	Health Psychology	2-4
PSYC 342	Psychopathology	4
PSYC 351	Human Sexuality	4
PSYC 371	The Psychology of Death and Dying	4
PSYC 331	Counseling substance use and addictions	4
PSYC 343	Child & Adolescent Mental Health	4
Sub-Total Credits		4

Elective Courses

Elective courses to bring minimum total to 24 credits.

Total Credits	24
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Social Justice Studies

Social Justice Studies Minor

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.

SJST Learning Objectives

- 1. Students will 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.
- 2. Students will demonstrate an understanding of different concepts of justice, and apply those definitions in evaluating specific social institutions.
- 3. Students will demonstrate familiarity with social movements and strategies that have been used historically to dismantle systemic inequality and to effect social change.
- 4. Students will examine their own identities and actions in light of their learning, demonstrating how their course of study prepares them to actively work toward a more just society.
- 5. Students will engage in experiential learning, getting outside of the classroom environment to develop and implement action plans and then reflecting on their experience.

Required courses:

Course Code	Title	Credits
SJST 101	Introduction to Social Justice Studies	4
SJST 450	Independent Study	1-4
	Completion of Social Justice Studies Portfolio	
	Sub-Total Credits	6-8

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)

Course Code	Title	Credits
ART 294	Art Force 5: Social Justice Research Design Outreach	2
	ARTH/WGST 382 Gender and Art History: Feminist Art in a Global Frame	4
BIOL 150	Biological Foundations	4

	COMM/WGST 465 Gender Race Class and Media	4
CRIM 340	Concepts of Penology	4
ECON 425	Wealth and Inequality	4
ENGL 217	Blood Guts and Alphabets: The Gory Truth about Children's Literature	4
ENGL 222	The Harlem Renaissance	4
ENGL 226	The Holocaust and Literature	4
	ENGL/WGST 254 Women Writers	2-4
	ENGL/WGST 256 Multicultural American Literature	4
ENGL 434	African-American Literature	4
	GERO 118/PSYC 118 Introduction to Adult Development and Aging	4
HIST 307	Post-World War II America	4
MUSC 219	Musical Reorientations:	4
	PHIL 304/POLS 304 Equality	2
POLS 242	Approaches to Law	4
POLS 316	American Constitutional Law and Politics	4
	POLS 341/PHIL 341 Modern Political Theory	4
POLS 346	American Political Thought	4
PSYC 282	Social Psychology	4
	PSYC 372/WGST 372 Psychology of Gender	4
SJST 200	Special Topics in SJST	1-4
SJST 300	Special Topics in Social Justice Studies	1-4
SJST 400	Special Topics in Social Justice Studies	1-4
SOCI 110	Introduction to Sociology	4
SOCI 344	Sociology of Deviance & Criminal Behavior	4
	SOCI 346/WGST 346 Sociology of Sex and Gender	4
SOCI 349	Sociology of Health Illness & Dis/ability	4
SOCI 355	Power Privilege and Inequality	4
	SOCI 356/POLS 356 Social Movements	4
	SPAN 213/GLBS 213 Speaking the Unspeakable: Argentina's Literature of Dictatorship	4
SPAN 217	Exiled from Justice: Equatorial Guinean Writers in Africa and Spain	4
SPED 456	Human Development: Exceptionality	3
UNIV 115	Concepts of Service Learning	2
WGST 101	Women and Gender in Society	4
	Sub-Total Credits	14

Special Topics Courses (SJST 200/300/400)

Other classes may be included in the minor with permission from the Director or board. Special topics classes are taught once or twice to capture a specific interest or explore a new area, and may count toward the minor as electives. In the past instructors have offered special topics courses in a wide array of subject areas. On average, there are approximately 1-3 SJST special topics courses offered in a given academic year. Most recently, the following topics courses have been offered:

- PHIL / SJST / WGST 300 Feminist Thought (Spring 25)
- PHIL / SJST 300 Justice (Spring 25, Spring 23)

- HIST / WGST / SJST 360 Topics: History of American Medicine: Race, Class, Gender, & Science (Spring 25)
- PHIL / SJST 300 Topics: Comedy, Social Justice, and Censorship (Fall 24, Fall 22)
- HIST / WGST / SJST 360 Topics: Sex, Power & Politics (Spring 23)
- PHIL / POLS / SJST / WGST Feminists Philosophy (Spring 23)

	Total Credits	20-22
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Social Sciences

Biological Anthropology Minor

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.

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.

Requirements for the Biological Anthropology minor

Core Courses

Take all from this section.

Course Code	Title	Credits
ANTH 120	Human Origins	4
BIOL 130	Introduction to Human Genetics	4
Sub-Total Credits		8

Electives

Complete 12 credits from these courses.

Course Code	Title	Credits
ANTH 300	Special Topics	1-4
ANTH 303	Health and Culture	4
BIOL 348	Animal Behavior	4
BIOL 375	Comparative Vertebrate Anatomy	4
BIOL 315	Genetics and Evolution of Populations	4
PSYC 270	Fundamentals of Neuropsychology	4
PSYC 351	Human Sexuality	4
Sub-Total Credits		12

Several 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

	Total Credits	20
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Criminal Justice Studies BA

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.

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.

Requirements for Criminal Justice Studies major

Core courses

Course Code	Title	Credits
	SJST/SOCI 110 Introduction to Sociology	4
	CRIM/SOCI 245 Crime and Society	4
	CRIM/SJST 340 Concepts of Penology	4
	CRIM/SOCI/SJST 344 Sociology of Deviance & Criminal Behavior	4
CRIM 451	Seminar in Criminal Behavior	4
	POLS/SOCI 230 Introduction to Data Analysis and Statistics	4
	Sub-Total Credits	24

Electives

Course Code	Title	Credits
CRIM 200	Special Topics	1-4
CRIM 300	Special Topics	1-4
CRIM 332	Focusing on Police	2
CRIM 400	Special Topics	1-4
CRIM 450	Independent Study	1-4
CRIM 470	Field Work in Criminal Justice Studies	2-4

ENVS 220	Introduction to Geographic Information Systems	4
PHIL 281	Ethics	4
	POLS/SOCI 229 Social Science Inquiry	4
POLS 310	Executive Branch Institutions	4
POLS 313	State and Local Politics	4
	POLS/SJST 316	4
POLS 332	Judicial Processes	4
POLS 355	Public Policy	4
POLS 373	Terrorism and International Security	4
POLS 442	Western Legal Thought	4
PSYC 210	Communication and Counseling Skills	2
PSYC 282	Social Psychology	4
PSYC 342	Psychopathology	4
SOCI 236	Cults Religions and Fandom	4
SOCI 242	Social Problems	4
	SOCI/WGST 253	4
SOCI 343	Race and Ethnicity	4
SPAN 301	Advanced Conversation and Composition	4
	Sub-Total Credits	20

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.

Notes

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

Some courses have prerequisites.

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Criminal Justice majors complete 8 - 30 credits of general education credits depending on elective selection as part of their degree program.

Sub-Total Credits	22-44
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University Requirements

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)

- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Criminal Justice Studies 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.

Requirements for Criminal Justice Studies major

Core courses

Course Code	Title	Credits
	SJST/SOCI 110 Introduction to Sociology	4
	CRIM/SOCI 245 Crime and Society	4
	CRIM/SJST 340 Concepts of Penology	4
	CRIM/SOCI/SJST 344 Sociology of Deviance & Criminal Behavior	4
CRIM 451	Seminar in Criminal Behavior	4
	POLS/SOCI 230 Introduction to Data Analysis and Statistics	4
	Sub-Total Credits	24

Electives

Course Code	Title	Credits
CRIM 200	Special Topics	1-4
CRIM 300	Special Topics	1-4
CRIM 332	Focusing on Police	2
CRIM 400	Special Topics	1-4
CRIM 450	Independent Study	1-4
CRIM 470	Field Work in Criminal Justice Studies	2-4
ENVS 220	Introduction to Geographic Information Systems	4
PHIL 281	Ethics	4
	POLS/SOCI 229 Social Science Inquiry	4
POLS 310	Executive Branch Institutions	4

POLS 313	State and Local Politics	4
	POLS/SJST 316	4
POLS 332	Judicial Processes	4
POLS 355	Public Policy	4
POLS 373	Terrorism and International Security	4
PSYC 210	Communication and Counseling Skills	2
PSYC 282	Social Psychology	4
PSYC 342	Psychopathology	4
SOCI 236	Cults Religions and Fandom	4
SOCI 242	Social Problems	4
	SOCI/WGST 253	4
SOCI 343	Race and Ethnicity	4
SPAN 301	Advanced Conversation and Composition	4
	Sub-Total Credits	20

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.

Notes

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

Some courses have prerequisites.

	Total Credits	44
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Criminal Justice Studies 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.

Requirements for the Criminal Justice Studies minor

Core Courses

Course Code	Title	Credits
	SJST/SOCI 110 Introduction to Sociology	4
	CRIM/SOCI 245 Crime and Society	4
	CRIM/SJST 340 Concepts of Penology	4
	Sub-Total Credits	12

Electives

Course Code	Title	Credits
	CRIM/SOCI/SJST 344 Sociology of Deviance & Criminal Behavior	4
CRIM 451	Seminar in Criminal Behavior	4
POLS 332	Judicial Processes	4
POLS 313	State and Local Politics	4
SOCI 242	Social Problems	4
SOCI 253	Social Welfare Institutions	4
	Sub-Total Credits	8

Most upper division courses have prerequisites; see course descriptions.

	Total Credits	20
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Cultural Anthropology Minor

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

Core Course

Course Code	Title	Credits
ANTH 110	Cultural Anthropology	4
	Sub-Total Credits	4

Electives

Complete 12 credits from the following list.

Course Code	Title	Credits
ANTH 120	Human Origins	4
ANTH 200	Special Topics	1-4
ANTH 240	Culture Through Film	4
ANTH 300	Special Topics	1-4

ANTH 302	The Nacirema	4
ANTH 303	Health and Culture	4
ANTH 304	Language and Culture	4
ANTH 450	Independent Study	1-4
ANTH 470	Field Work	2-4
ARTH 304	Global Arts: Contemporary Asia	4
ARTH 305	South Asian Arts 15-20c: Mughals to Modern	4
Sub-Total Credits		12

ANTH 302, ANTH 303, ANTH 304, ANTH 450, ANTH 470: These courses have prerequisites; see course descriptions.

Total Credits	16
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Political Science BA

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 both domestic and global politics. 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.

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.

Core Courses

Course Code	Title	Credits
POLS 110	American Politics	4
POLS 150	World Politics	4
	POLS/SOCI 229 Social Science Inquiry	4
	POLS/SOCI 230 Introduction to Data Analysis and Statistics	4
Sub-Total Credits		16

Core Subject Areas

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

American Politics:

Course Code	Title	Credits
POLS 310	Executive Branch Institutions	4
POLS 313	State and Local Politics	4
POLS 318	The Presidency	4
POLS 331	Parties and Elections	4
	Sub-Total Credits	4

Political Thought:

Course Code	Title	Credits
POLS 341	Modern Political Theory	4
	POLS/SOCI 420 Social Theory: A Survey	4
	Sub-Total Credits	4

Comparative and International Politics:

Course Code	Title	Credits
POLS 253	Dictatorship and Democracy	4
	POLS/GLBS 351	4
POLS 354	History and Politics of the Middle East	4
	POLS/HIST 382	4
	Sub-Total Credits	4

Electives

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

Course Code	Title	Credits
POLS 200	Special Topics	1-4
	POLS/ENVS/SOCI 214	4
	POLS/COMM/SOCI 237	4
POLS 300	Special Topics	1-4
	POLS/PHIL/SJST 304	2
	POLS/SJST 316	4
	POLS/HIST 321	4
	POLS/HIST/PHIL 329	4
POLS 332	Judicial Processes	4
POLS 355	Public Policy	4
	POLS/SJST/SOCI 356	4
POLS 373	Terrorism and International Security	4
POLS 400	Special Topics	1-4
POLS 442	Western Legal Thought	4
POLS 450	Independent Study	1-4

POLS 470	Field Work	2-4
Sub-Total Credits		12

See course descriptions for required prerequisites.

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Political Science majors complete 8 credits of quantitative reasoning and social science requirements as part of their degree program.

Sub-Total Credits		44
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

Total Credits		124
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Political Science BA: 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.

Core Courses

Course Code	Title	Credits
POLS 110	American Politics	4
POLS 150	World Politics	4
	POLS/SOCI 230 Introduction to Data Analysis and Statistics	4
Sub-Total Credits		12

Core Subject Areas

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

American Politics:

Course Code	Title	Credits
POLS 310	Executive Branch Institutions	4

POLS 313	State and Local Politics	4
POLS 318	The Presidency	4
POLS 331	Parties and Elections	4
Sub-Total Credits		4

Political Thought:

Course Code	Title	Credits
	POLS/PHIL/SJST 341	4
	POLS/SOCI 420 Social Theory: A Survey	4
Sub-Total Credits		4

Electives

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

Course Code	Title	Credits
POLS 200	Special Topics	1-4
	POLS/ENVS/SOCI 214	4
	POLS/COMM/SOCI 237	4
POLS 300	Special Topics	1-4
	POLS/SJST 316	4
	POLS/HIST 321	4
	POLS/HIST/PHIL 329	4
POLS 332	Judicial Processes	4
POLS 355	Public Policy	4
	POLS/SJST/SOCI 356	4
POLS 373	Terrorism and International Security	4
POLS 400	Special Topics	1-4
POLS 417	American Civil Liberties	2
POLS 442	Western Legal Thought	4
POLS 450	Independent Study	1-4
Sub-Total Credits		8

Two courses in related social sciences and geography

Course Code	Title	Credits
ECON 201	Principles of Microeconomics	3
GEOL 101	This Dynamic Earth	4
Sub-Total Credits		7

Four Courses in History

Course Code	Title	Credits
HIST 111	Modern Western History	4

HIST 211	Early US History	4
HIST 212	Modern US History	4
	100- or 200-level HIST course	4
Sub-Total Credits		16

See course descriptions for prerequisites.

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Political Science Education track majors complete 16 credits of quantitative reasoning and natural science requirements as part of their degree program.

Sub-Total Credits		36
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Political Science Double Major

Core Courses

Course Code	Title	Credits
POLS 110	American Politics	4
POLS 150	World Politics	4
	POLS/SOCI 229 Social Science Inquiry	4
	POLS/SOCI 230 Introduction to Data Analysis and Statistics	4
Sub-Total Credits		16

Core Subject Areas

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

American Politics:

Course Code	Title	Credits
POLS 310	Executive Branch Institutions	4
POLS 313	State and Local Politics	4

POLS 318	The Presidency	4
POLS 331	Parties and Elections	4
	Sub-Total Credits	4

Political Thought:

Course Code	Title	Credits
POLS 341	Modern Political Theory	4
	POLS/SOCI 420 Social Theory: A Survey	4
	Sub-Total Credits	4

Comparative and International Politics:

Course Code	Title	Credits
POLS 253	Dictatorship and Democracy	4
	POLS/GLBS 351	4
POLS 354	History and Politics of the Middle East	4
	POLS/HIST 382	4
	Sub-Total Credits	4

Electives

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

Course Code	Title	Credits
POLS 200	Special Topics	1-4
	POLS/ENVS/SOCI 214	4
	POLS/COMM/SOCI 237	4
POLS 300	Special Topics	1-4
	POLS/PHIL/SJST 304	2
	POLS/SJST 316	4
	POLS/HIST 321	4
	POLS/HIST/PHIL 329	4
POLS 332	Judicial Processes	4
POLS 355	Public Policy	4
	POLS/SJST/SOCI 356	4
POLS 373	Terrorism and International Security	4
POLS 400	Special Topics	1-4
POLS 442	Western Legal Thought	4
POLS 450	Independent Study	1-4
POLS 470	Field Work	2-4
	Sub-Total Credits	12

See course descriptions for course prerequisites.

	Total Credits	40
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Political Science 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.

Requirements for the minor in Political Science

Course Code	Title	Credits
POLS 110	American Politics	4
POLS 150	World Politics	4
	12 additional hours in Political Science	12
	Sub-Total Credits	20
	Total Credits	20

Public Law 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.

Requirements for the minor in Public Law

Course Code	Title	Credits
POLS 110	American Politics	4
	POLS/SJST 316 American Constitutional Law and Politics	4
POLS 332	Judicial Processes	4
	Sub-Total Credits	12

Plus one course from the following:

Course Code	Title	Credits
POLS 313	State and Local Politics	4
	CRIM/SOCI 245 Crime and Society	4
POLS 442	Western Legal Thought	4
	Sub-Total Credits	4

Upper level courses have prerequisites; see course descriptions.

	Total Credits	16
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Science Policy Minor

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.

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.

Required courses for Science Policy minor:

Course Code	Title	Credits
POLS 110	American Politics	4
POLS 310	Executive Branch Institutions	4
POLS 355	Public Policy	4
	Experiential Capstone Project	2-4
To be determined under advisement		
	Sub-Total Credits	14-16
	Total Credits	14-16

Sociology BA

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.

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 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.

Core Courses

Take all courses in this section.

Course Code	Title	Credits
	SOCI/SJST 110 or ANTH 110	4
	POLS/SOCI 229 Social Science Inquiry	4
	POLS/SOCI 230 Introduction to Data Analysis and Statistics	4
	POLS/SOCI 420 Social Theory: A Survey	4
	Sub-Total Credits	16

Electives

Complete 20 hours of elective credits from this section.

Course Code	Title	Credits
SOCI 200	Special Topics	1-4
	POLS/ENVS/SOCI 214	4
SOCI 236	Cults Religions and Fandom	4
	POLS/COMM/SOCI 237	4
SOCI 242	Social Problems	4
	CRIM/SOCI 245 Crime and Society	4
	SOCI/WGST 253	4
SOCI 343	Race and Ethnicity	4
	CRIM/SOCI/SJST 344 Sociology of Deviance & Criminal Behavior	4
	SOCI/WGST 346	4
	SOCI/WGST 348	4
	SOCI/SJST 349	4
	POLS/SJST/SOCI 356	4
	SOCI 300/400	1-4
SOCI 450	Independent Study	1-4
SOCI 470	Application of Sociology Field Work	2-4
ANTH 302	The Nacirema	4
ANTH 303	Health and Culture	4
ANTH 304	Language and Culture	4
	Sub-Total Credits	20

Many courses listed above have prerequisites; see course descriptions.

CLAS General Education Requirements

Complete remaining [CLAS General Education requirements](#). Sociology majors complete 8 credits of quantitative reasoning and social science requirements as part of their degree program.

Sub-Total Credits	44
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

General Electives

Take as many general elective courses as needed to complete a total of 124 credits.

	Total Credits	124
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Sociology Double Major

Core Courses

Take all courses in this section.

Course Code	Title	Credits
	SOCI/SJST 110 or ANTH 110	4
	POLS/SOCI 230 Introduction to Data Analysis and Statistics	4
	POLS/SOCI 420 Social Theory: A Survey	4
	POLS/SOCI 229 Social Science Inquiry	4
	Sub-Total Credits	16

Electives

Complete 20 hours of electives from this section.

Course Code	Title	Credits
SOCI 200	Special Topics	1-4
	POLS/ENVS/SOCI 214	4
SOCI 236	Cults Religions and Fandom	4
	POLS/COMM/SOCI 237	4
SOCI 242	Social Problems	4
	CRIM/SOCI 245 Crime and Society	4
	SOCI/WGST 253	4
SOCI 343	Race and Ethnicity	4
	CRIM/SOCI/SJST 344 Sociology of Deviance & Criminal Behavior	4
	SOCI/WGST 346	4
	SOCI/WGST 348	4
	SOCI/SJST 349	4
	POLS/SJST/SOCI 356	4
	SOCI 300/400	1-4
SOCI 450	Independent Study	1-4
SOCI 470	Application of Sociology Field Work	2-4
ANTH 302	The Nacirema	4

ANTH 303	Health and Culture	4
ANTH 304	Language and Culture	4
Sub-Total Credits		20

Many of the above courses have prerequisites; see course descriptions.

Total Credits	36
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Sociology 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.

Requirements for the minor in Sociology

Course Code	Title	Credits
	SJST/SOCI 110 Introduction to Sociology	4
	POLS/SOCI 230 Introduction to Data Analysis and Statistics	4
	POLS/SOCI 420 Social Theory: A Survey	4
8 additional credit hours of sociology courses		8
Sub-Total Credits		20

SOCI/POLS 420, SOCI/POLS 431: These courses have prerequisites; see course descriptions.

Total Credits	20
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Women's and Gender Studies

Women's and Gender Studies Minor

At a time when issues concerning women and gender can be matters of life and death, the Women's and Gender Studies Program is excited about our Minor, which offers all students the opportunity to examine these issues from interdisciplinary perspectives. Faculty from throughout the university participate in our program by offering courses, guest lectures or organizing other activities. As our program includes faculty from many different disciplines, this is reflected in courses which offer a variety of conceptual frameworks. We believe that approaching issues from various perspectives allows for a deeper understanding of complex issues.

The WGST minor offers you many pathways to explore these issues, some more theoretical and some more practical, but all guided by fact-based evidence and attention to real life consequences. When you join this program, your questions and your concerns help guide what we offer and explore as a community. We encourage all WGST students to participate at some point during their studies in creating our annual publication, the Alphadelphian. As you near the end of your studies, you will be asked to complete an independent study project, which serves as a capstone experience. At that point, we hope you will have found a project that inspires you and that you are eager to share with others. Your informed voice is a vital part of our future.

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.

Requirements for the minor

Required Courses

Course Code	Title	Credits
	WGST 101/SJST 202 Women and Gender in Society	4
WGST 450	Independent Study	1-4
	Sub-Total Credits	6

Elective Courses

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

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

Course Code	Title	Credits
	I: Humanities	
English		
ENGL 254	Women Writers	2-4
SJST 254	Women Writers	2-4
WGST 254	Women Writers	2-4
ENGL 256	Multicultural American Literature	4
SJST 256	Multicultural American Literature	4
WGST 256	Multicultural American Literature	4
ENGL 323	Alphadelphian	2
COMM 323	Alphadelphian	2
WGST 323	Alphadelphian	2
WGST 400	Special Topics	1-4
History		
WGST 300	Special Topics	1-4
SJST 300	Special Topics in Social Justice Studies	1-4
WGST 360	Topics in Women's and Gender Studies	1-4
Modern Languages		
FREN 208	Francophone Queer Voices	4
WGST 208	Francophone Queer Voices	4
SPAN 215	Framing Gender: Latin American Film	4
WGST 215	Framing Gender: Latin American Film	4
Religion		
WGST 200	Special Topics	1-4
RLGS 200	Topics in Religious Studies	1-4

Philosophy

PHIL 300	Topics in Philosophy	1-4
WGST 300	Special Topics	1-4
II: Social Sciences		

Psychology

PSYC 320	Parenting Seminar	2-3
WGST 320	Parenting Seminar	2
PSYC 351	Human Sexuality	4
WGST 351	Human Sexuality	4
PSYC 372	Psychology of Gender	4
SJST 372	Psychology of Gender	4
WGST 372	Psychology of Gender	4

Sociology

SOCI 253	Social Welfare Institutions	4
WGST 253	Social Welfare Institutions	4
SOCI 346	Sociology of Sex and Gender	4
SJST 346	Sociology of Sex and Gender	4
WGST 346	Sociology of Sex and Gender	4
SOCI 348	Sociology of Families	4
WGST 348	Sociology of Families	4
SOCI 349	Sociology of Health Illness & Dis/ability	4
WGST 349	Sociology of Health Illness & Dis/ability	4
SOCI 300	Special Topics	2-4
WGST 300	Special Topics	1-4
III: Fine and Performing Arts		
WGST 300	Special Topics	1-4
ARTH 300	Topics in Art History	1-4
ARTH 382	Gender and Art History: Feminist Art in a Global Frame	4
WGST 382	Gender and Art History: Feminist Art in a Global Frame	4
IV. Business		
WGST 318	Gender Equity in Business	3
MGMT 318	Gender Equity in Business	3
V. Women's and Gender Studies		
WGST 201	Gender and Leadership	2
WGST 475	Women's Leadership Academy Practicum	2
Sub-Total Credits		12

Topics courses may be applied to groups with WGST advisor approval.

	Total Credits	18
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Performing Arts Division

Overview

The Performing Arts Division provides collaborative, rigorous and contemporary programs across Dance, Music, Performance Design and Technology, and Theatre. 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**
 - The ability to apply the principles and practices/skills of a professional artist/designer
 - To understand the world through the study of global, historic, and contemporary art
- **Critical Thinking**
 - To integrate knowledge critically and analytically
 - To observe, analyze, and explain motivation for, and intent of, an individual's work
- **Communication**
 - Proficiency in communicating through writing and speaking
 - To create a professional portfolio

Bachelor of Arts

The Bachelor of Arts (BA) is a flexible and interdisciplinary degree that provides students with a broad foundation in the liberal arts while allowing for focused study in a specific field. Rooted in critical thinking, creativity, and effective communication, the BA degree encourages intellectual exploration and the development of diverse perspectives.

Designed to foster adaptability and lifelong learning, the BA degree emphasizes analytical and problem-solving skills, preparing students for a wide range of careers and graduate study. With opportunities for hands-on learning, research, and collaboration, students gain the knowledge and experience needed to navigate an ever-changing world with confidence and purpose.

All courses in major area must have a minimum grade of C.

Bachelor of Fine Arts - Interdisciplinary Performing Arts

The Bachelor of Fine Arts (BFA) degree is an immersive, interdisciplinary program designed for students seeking intensive training in the arts. Rooted in a dynamic and collaborative environment, the BFA integrates creative practice, theory, and technical skill development across multiple disciplines. Students engage in hands-on learning, working closely with faculty and peers in classroom settings, performances, and exhibitions.

The BFA extends beyond traditional boundaries, encouraging interdisciplinary exploration across the Performing Arts and other fields. This approach allows students to tailor their education to their unique artistic vision, fostering innovative work that blends mediums and ideas. With access to excellent facilities, mentorship from active professionals, and numerous opportunities for creative collaboration, the BFA prepares students for professional careers in the arts, as well as advanced study at the graduate level.

All courses in major area must have a minimum grade of C.

Departments/Divisions

Performing Arts

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Student Learning Outcomes:

- **Content Knowledge**
 - The ability to apply the principles and practices/skills of a professional artist/designer
 - To understand the world through the study of global, historic, and contemporary art
- **Critical Thinking**
 - To integrate knowledge critically and analytically
 - To observe, analyze, and explain motivation for, and intent of, an individual's work
- **Communication**
 - Proficiency in communicating through writing and speaking
 - To create a professional portfolio

Dance Double Major

The Bachelor of Fine Arts (BFA) in Dance is an interdisciplinary program that combines dance training, creative exploration, and collaborative performance. Open to students of all backgrounds, the curriculum integrates choreography, movement studies, dance history, and interdisciplinary projects with music, theatre, performance design and technology, and in disciplines and programs outside the Performing Arts. Students have access to excellent faculty, guest artists, and the Dance Residency Program, providing opportunities to engage with professionals in the field. The program prepares students for careers in dance, performance, and related fields by fostering artistic growth, critical inquiry, and adaptability in the evolving landscape of contemporary dance.

All major course grades must be a C or higher.

Required courses

Complete the following:

Course Code	Title	Credits
DANC 120	Fundamentals of Dance	2
DANC 211	Dance History	4
DANC 222	Modern Dance I	2
DANC 225	Laban Movement Analysis	4
DANC 230	Improvisation/Composition I	4
DANC 270	Alfred University Dance Theatre	2
DANC 330	Improvisation/Composition II	4
DANC 331	Site Specific Composition	4
DANC 340	New and Existing Repertory	2
Sub-Total Credits		30

DANC 270 should be taken twice for 4 credits total

Elective courses

Select 6 credits from the following:

Course Code	Title	Credits
DANC 200	Special Topics in Dance	1-4
DANC 212	Wanderlust: The connection between walking creativity and place	4
DANC 214	Embodied Anatomy	2
DANC 223	Jazz Dance I	2
DANC 224	Contact Improvisation	2
DANC 226	Hip Hop Dance	2
DANC 227	African Dance	2
DANC 322	Modern Dance II	2
DANC 370	Choreographic Practicum	2
DANC 450	Independent Study	1-4
Sub-Total Credits		6

	Total Credits	36
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Dance Minor

The Dance minor is composition based and designed to develop artistry in dance making and performance. Students work with the moving body as the primary material and a way of knowing and creating. The program encourages cross-disciplinary work such as visual art, environmental studies, sound design, performance art, and theater, drawing from strengths unique and specific to Alfred University.

All courses in major area must have a minimum grade of C.

Dance Minor Core Courses

Take all in this section.

Course Code	Title	Credits
DANC 120	Fundamentals of Dance	2
DANC 211	Dance History	4
DANC 222	Modern Dance I	2
DANC 230	Improvisation/Composition I	4
DANC 270	Alfred University Dance Theatre	2
	DANC 330 or DANC 331	4
	Sub-Total Credits	18

Dance Minor Elective

2 credits to be chosen from the following courses:

Course Code	Title	Credits
DANC 200	Special Topics in Dance	1-4
DANC 212	Wanderlust: The connection between walking creativity and place	4
DANC 214	Embodied Anatomy	2
DANC 223	Jazz Dance I	2
DANC 224	Contact Improvisation	2
DANC 225	Laban Movement Analysis	4
DANC 226	Hip Hop Dance	2
DANC 227	African Dance	2
DANC 330	Improvisation/Composition II	4
DANC 331	Site Specific Composition	4
DANC 340	New and Existing Repertory	2
DANC 370	Choreographic Practicum	2
DANC 450	Independent Study	1-4
	Sub-Total Credits	2

[DANC 330](#) and [DANC 331](#) may each fulfill either a core or elective requirement, but not both.

	Total Credits	20
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Interdisciplinary Performing Arts: Dance BFA

The Bachelor of Fine Arts (BFA) in Dance is an interdisciplinary program that combines dance training, creative exploration, and collaborative performance. Open to students of all backgrounds, the curriculum integrates choreography, movement studies, dance history, and interdisciplinary projects with music, theatre, performance design and technology, and in disciplines and programs outside the Performing Arts. Students have access to excellent faculty, guest artists, and the Dance Residency Program, providing opportunities to engage with professionals in the field. The program prepares students for careers in dance, performance, and related fields by fostering artistic growth, critical inquiry, and adaptability in the evolving landscape of contemporary dance.

All major course grades must be a C or higher.

BFA Dance Required Courses

Complete the following:

Course Code	Title	Credits
DANC 120	Fundamentals of Dance	2
DANC 211	Dance History	4
DANC 212	Wanderlust: The connection between walking creativity and place	4
DANC 214	Embodied Anatomy	2
DANC 222	Modern Dance I	2
DANC 223	Jazz Dance I	2
DANC 224	Contact Improvisation	2
DANC 225	Laban Movement Analysis	4
DANC 226	Hip Hop Dance	2
DANC 227	African Dance	2
DANC 230	Improvisation/Composition I	4
DANC 270	Alfred University Dance Theatre	2
DANC 322	Modern Dance II	2
DANC 330	Improvisation/Composition II	4
DANC 331	Site Specific Composition	4
DANC 340	New and Existing Repertory	2
DANC 370	Choreographic Practicum	2
DANC 495	Dance Capstone	4
DANC 496	Dance Capstone II	4
PERF 101	Core I: Making, Seeing, and Re	4
PERF 102	Core II: Making, Seeing, and Reflecting (Dance and Performance Design and Technology)	4
PERF 201	Living a Sustainable Life as a Professional Artist	4
PERF 230	Stage Management and the Art of Production Collaboration	4
PDAT 228	Costume Design for Dance	2
PDAT 231	Prop Design and Construction	2

PDAT 223	Sound Design and Technology	4
PHIL 283	Philosophy of the Arts I	4
MUSC 211	World Music	4
THEA 145	Improvisation: Just Say Yes!	2
	ENGL 101 or ENGL 102	4
	Sub-Total Credits	92

In addition to [ENGL 101](#) or [ENGL 102](#), the academic course requirement is fulfilled by [DANC 211](#), [DANC 214](#), [DANC 225](#), [DANC 495](#), [PHIL 283](#), [MUSC 211](#).

University Requirements

The University Requirements must also be fulfilled, and will count towards the required minimum credits for this program:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

[MUSC 211](#) will fulfill the Global Perspective requirement. [DANC 120](#) and [THEA 145](#) will fulfill Lifetime Health & Wellness.

Electives

Take as many general elective courses as needed to complete a minimum of 125 credits.

	Total Credits	125
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Interdisciplinary Performing Arts: Music BFA

The Bachelor of Fine Arts (BFA) in Music is an interdisciplinary program that combines rigorous musical training with creative exploration and collaborative performance. The curriculum integrates music theory, history, composition, and performance while encouraging cross-disciplinary projects with theatre, dance, and performance design and technology.

Students work closely with faculty mentors and visiting artists, gaining hands-on experience through ensembles, private lessons, and capstone projects. With access to excellent facilities and a vibrant arts community, the program prepares students for careers in performance and related fields, fostering artistic growth and adaptability in an ever-evolving musical landscape.

Learning Outcomes for BFA Interdisciplinary Performing Arts – Music:

- Musical Expression and Creativity**
Students will demonstrate the ability to express themselves creatively through music, utilizing their instrument or voice to interpret and perform diverse musical works in both solo and ensemble settings.
- Interdisciplinary Collaboration and Innovation**
Students will engage in collaborative projects that blend music with other artistic disciplines such as theatre, dance, and performance design and technology, fostering cross-disciplinary creativity and innovative expression.
- Music Theory, History, and Composition Understanding**
Students will apply their knowledge of music theory, history, and composition to enhance their artistic practice, analyzing and creating music while connecting it to historical and cultural contexts.

4. **Creative Exploration**
Students will experiment with various musical styles, genres, and forms, and exploring their unique creative voices while developing their understanding of musical structures and techniques.
5. **Professional Development and Adaptability**
Students will develop practical skills and a professional mindset, preparing for careers in performance and related fields and demonstrating the ability to adapt to the evolving demands of the music industry.

All courses in major area must have a minimum grade of C.

BFA Music Required Courses

Take all in this section:

Course Code	Title	Credits
MUSC 112	Fundamentals of Musicianship	1
MUSC 113	Creative Lab	1
MUSC 120	Music Theory I	4
MUSC 132	Beginning Voice Class I	2
MUSC 211	World Music	4
MUSC 219	Musical Reorientations:	4
MUSC 220	Music Theory II	4
MUSC 225	Western Music History I	4
MUSC 226	Music History II: Romanticism to the 20th Century	4
MUSC 240	Songwriting and Composition	2
MUSC 495	Music Capstone-Research	2
MUSC 496	Music Capstone: Performance/Presentation	2
DANC 120	Fundamentals of Dance	2
PERF 101	Core I: Making, Seeing, and Re	4
PERF 102	Core II: Making, Seeing, and Reflecting (Dance and Performance Design and Technology)	4
PERF 201	Living a Sustainable Life as a Professional Artist	4
PERF 230	Stage Management and the Art of Production Collaboration	4
	PDAT 223 or PDAT 224	2
THEA 240	Acting I	4
	ENGL 101 or ENGL 102	4
	SOAD: Humanities - Area B or D	4
	Sub-Total Credits	66

In addition to the ENGL and SoAD Humanities listed above, the Academic Course requirement is fulfilled by: [MUSC 112](#), [MUSC 113](#), [MUSC 120](#), [MUSC 219](#), [MUSC 220](#), and others.

Lessons and Ensembles

Students are expected to take 2 semesters of either class piano or guitar lessons, 2 credits of beginning private lessons, 6 credits of advanced private lessons, and 26 credits of music ensembles.

Course Code	Title	Credits
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	Class Piano or Class Guitar I	2
MUSC 130	Beginning Class Piano I	2
MUSC 135	Class Guitar I	2
	Class Piano or Class Guitar II	2
MUSC 131	Beginning Class Piano II	2
MUSC 136	Class Guitar II	2
	Beginning Private Lessons	2
MUSC 101	Private Lessons-Piano	1
MUSC 102	Private Lessons-Voice	1
MUSC 103	Private Lessons-Brass	1
MUSC 104	Private Lessons-Woodwinds	1
MUSC 105	Private Lessons-Strings	1
MUSC 106	Private Lessons-Percussion	1
MUSC 107	Private Lessons-Guitar	1
	Advanced Private Lessons	6
MUSC 301	Private Lessons-Piano Advanced	2
MUSC 302	Private Lessons-Voice Advanced	2
MUSC 303	Private Lessons-Brass Advanced	2
MUSC 304	Private Lessons-Woodwinds Advanced	2
MUSC 305	Private Lessons-Strings Advanced	2
MUSC 306	Private Lessons-Percussion Advanced	2
MUSC 307	Private Lessons-Guitar Advanced	2
	Sub-Total Credits	38

University Requirements

The University Requirements must also be fulfilled, and will count towards the required minimum credits for this program:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

[MUSC 211](#) will fulfill the Global Perspective requirement. [DANC 120](#) will be applied to the Lifetime Health & Wellness requirement.

Electives

Take as many general elective courses as needed to complete a total of 122 credits, except PFIT courses.

	Total Credits	122
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Interdisciplinary Performing Arts: Performance Design and Technology

BFA

The Bachelor of Fine Arts (BFA) in Performance Design and Technology (PDAT) offers an interdisciplinary approach to the art and technical aspects of live performance. This program is designed for students who are passionate about blending creativity with technology to bring theatrical productions to life. Focusing on the design, creation, and technical execution of live performances, students will explore areas such as scenic design, lighting design, sound design, costume design, and stage management.

Through hands-on experience, students will develop the skills necessary to craft the visual and auditory elements of theatre, dance, and other live performances, while learning how to work collaboratively within a multidisciplinary team. The program emphasizes both artistic expression and technical expertise, preparing students to bridge the gap between the creative and technical aspects of performance.

Learning Outcomes for BFA in Performance Design and Technology

- 1. Creative and Technical Design Skills**
Students will demonstrate the ability to design and create visual and auditory elements for live performances, including set, lighting, sound, and costume design, using both traditional and innovative techniques and technologies.
- 2. Proficiency in Production and Technical Execution**
Students will develop the technical skills necessary for executing and managing the technical aspects of live performances, including set-up, operation, and troubleshooting of equipment in areas such as lighting, sound, and stage management.
- 3. Collaboration and Teamwork in Performance Production**
Students will effectively collaborate with directors, performers, designers, and technicians to integrate artistic vision with technical execution, contributing to the seamless realization of a production.
- 4. Problem-Solving and Innovation in Design and Technology**
Students will demonstrate the ability to think creatively and adaptively, solving complex design and technical challenges through innovative approaches that enhance the overall performance experience.
- 5. Professional Preparedness and Industry Engagement**
Students will develop the professional skills necessary to succeed in the performance design and technology industries, including project management, communication, and networking, while gaining practical experience in real-world production environments.

BFA PDAT Required Courses

Take all:

Course Code	Title	Credits
PDAT 120	Technical Theatre	4
PDAT 220	Design Fundamentals for Stage Dance and Film	4
	PDAT 271/272/273 Professional Tech Practicum - Take 2 courses	2
PDAT 302	Computer Aided Theatrical Draf	2
PDAT 315	Advanced Design Seminar: Design is Dramaturgy	2
PDAT 320	Scene Design	2
PDAT 321	Lighting Design	2
PDAT 322	Costume Design	2
	PDAT 371/372/373 Advanced Practicum - Take 2	4
PDAT 371	Advanced Performance Design	1-4
PDAT 372	Play Production-Lab	1-4
PDAT 373	Advanced Performance Management Practicum	1-4

PDAT 495	Senior Project	4
DANC 120	Fundamentals of Dance	2
DANC 211	Dance History	4
PERF 101	Core I: Making, Seeing, and Re	4
PERF 102	Core II: Making, Seeing, and Reflecting (Dance and Performance Design and Technology)	4
PERF 201	Living a Sustainable Life as a Professional Artist	4
PERF 230	Stage Management and the Art of Production Collaboration	4
THEA 212	From Page to Stage: Script Analysis	4
THEA 240	Acting I	4
THEA 242	Collaborative Performance Lab	4
THEA 311	Classical World Theatre: History Art Politics & Society	4
SPHS 119	Responding to Emergencies	2
	ENGL 101 or ENGL 102	4
	SOAD: Humanities - Area B or D	4
	Additional Academic Electives (PDAT)	6

Each student must complete 6 credits of additional academics that can be made up of courses from the following areas:

- Most courses offered by the College of Liberal Arts and Sciences
- Select courses offered by the Inamori School of Engineering
- Select courses offered by the Division of Performing Arts
- Art History courses
- Honors Seminars (HONR 101-480)
- University Courses (UNIV 102-450)
- Wellness Courses (WELL 100-101)
- Off Campus Courses (OCST 301 and 325)

Sub-Total Credits	82
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In addition to the ENGL and SoAD Humanities listed above, the 14 credit Academic Course requirement is partially fulfilled by: [DANC 211](#) and [THEA 212](#). Depending on PDAT elective selections, the remaining 6 credits of academic electives may be fulfilled.

PDAT Elective Courses

Take 24 credits from the below list of courses:

Course Code	Title	Credits
PDAT 200	Special Topics in Performance Design and Technology	1-4
PDAT 222	Stage Makeup	2
PDAT 223	Sound Design and Technology	4
PDAT 224	Entertainment Lighting: Electricity and Equipment	2
PDAT 226	Scenic Painting	2
PDAT 228	Costume Design for Dance	2
PDAT 229	Transforming Fabric	4
PDAT 231	Prop Design and Construction	2
PDAT 330	Costuming on the Half Scale	4

PDAT 340	Advanced Technical Practices	2
PDAT 370	Advanced Play Production	2
ART 111	Drawing for Non-Art Majors	4
ART 121	Sculpture for Non-Majors	4
ARTH 120	Topics in Art History: Non-western	2
ARTH 130	Topics in Art History: Ancient to Baroque	2
COMM 216	Video Production	4
ENGR 101	Introduction to Engineering	2
ENGR 107	Machine Shop Training	1
MUSC 216	Essentials of Mixing & Recording	4
MUSC 205	SOUND GATHERING: Music Sound and Environment	2
Sub-Total Credits		24

University Requirements

The University Requirements must also be fulfilled, and will count towards the required minimum credits for this program:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

[DANC 120](#) and [SPHS 119](#) fulfill the Lifetime Health & Wellness requirement.

Elective Courses

Take as many general elective courses as needed to complete a total of 125 credits.

Total Credits	125
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Interdisciplinary Performing Arts: Sound Studies BFA

The Bachelor of Fine Arts (BFA) in Music – Sound Studies offers a dynamic and interdisciplinary approach to the exploration of sound as an artistic and expressive medium. This program is designed for students passionate about sound design, composition, and the creative use of sound across diverse fields. Students will engage with sound in various contexts, including music composition, experimental sound art, acoustics, and multimedia applications.

The curriculum combines creative and technical aspects, providing students with the opportunity to explore sound through hands-on projects, critical listening, and experimentation. Students will gain a strong foundation in the theory and practice of sound, while developing their own unique sonic voice. The program emphasizes artistic innovation, critical thinking, and collaboration, preparing graduates to push the boundaries of sound.

Learning Outcomes for BFA in Music – Sound Studies

1. **Sound Creation and Composition**
Students will demonstrate the ability to create original works of sound through composition, improvisation, and experimentation, utilizing both traditional and innovative techniques to manipulate sound across various mediums.

2. **Sound Creation and Manipulation**

Students will develop an artistic mastery in creating, shaping, and transforming sound. They will explore various methods of sound production, from capturing natural sounds to experimenting with digital tools, using these skills to craft unique auditory experiences that resonate across diverse artistic and media landscapes.

3. **Critical Listening and Analysis**

Students will exhibit advanced critical listening skills, analyzing and interpreting sound in both artistic and technical contexts, and applying this knowledge to enhance creative projects and productions.

4. **Interdisciplinary Collaboration**

Students will engage in collaborative projects that integrate sound with other disciplines (such as visual art, performance, or theater), demonstrating the ability to work effectively in cross-disciplinary teams to produce cohesive artistic works.

5. **Creative Innovation**

Students will demonstrate professional readiness for careers in sound-related industries, exhibiting innovative approaches to sound design, problem-solving, and the ability to adapt to emerging technologies and trends in sound and multimedia production.

All courses in major area must have a minimum grade of C.

BFA Sound Studies Required Courses

Take all in this section:

Course Code	Title	Credits
MUSC 112	Fundamentals of Musicianship	1
MUSC 113	Creative Lab	1
MUSC 120	Music Theory I	4
MUSC 205	SOUND GATHERING: Music Sound and Environment	2
MUSC 211	World Music	4
MUSC 212	American Popular Music	4
MUSC 216	Essentials of Mixing & Recording	4
MUSC 219	Musical Reorientations:	4
MUSC 220	Music Theory II	4
MUSC 225	Western Music History I	4
MUSC 226	Music History II: Romanticism to the 20th Century	4
MUSC 240	Songwriting and Composition	2
MUSC 495	Music Capstone-Research	2
MUSC 496	Music Capstone: Performance/Presentation	2
PERF 101	Core I: Making, Seeing, and Re	4
PERF 102	Core II: Making, Seeing, and Reflecting (Dance and Performance Design and Technology)	4
PERF 201	Living a Sustainable Life as a Professional Artist	4
PERF 230	Stage Management and the Art of Production Collaboration	4
PHIL 283	Philosophy of the Arts I	4
THEA 240	Acting I	4
	ENGL 101 or ENGL 102	4
	Sub-Total Credits	70

In addition to the [ENGL 101](#) or [ENGL 102](#) listed above, the Academic Course requirement is fulfilled by: [MUSC 112](#), [MUSC 113](#), [MUSC 120](#), [MUSC 219](#), [MUSC 220](#), and others.

Lessons and Ensembles

Students are expected to take 2 semesters of either class piano or guitar lessons, 2 credits of beginning private lessons or [MUSC 132](#) Beginning Voice, 2 credits of advanced private lessons, and 12 credits of music ensembles.

Course Code	Title	Credits
Class Piano or Class Guitar I		2
MUSC 130	Beginning Class Piano I	2
MUSC 135	Class Guitar I	2
Class Piano or Class Guitar II		2
MUSC 131	Beginning Class Piano II	2
MUSC 136	Class Guitar II	2
Beginning Private Lessons: Sound Studies		2
MUSC 101	Private Lessons-Piano	1
MUSC 102	Private Lessons-Voice	1
MUSC 103	Private Lessons-Brass	1
MUSC 104	Private Lessons-Woodwinds	1
MUSC 105	Private Lessons-Strings	1
MUSC 106	Private Lessons-Percussion	1
MUSC 107	Private Lessons-Guitar	1
MUSC 132	Beginning Voice Class I	2
Sub-Total Credits		20

Sound Studies Electives

Complete 16 credits from the below list, 4 of which must be in the additional academic category.

Special topics courses in COMM/ANTH/SOCI/PSYC/BUSI/ART/ENGL may be taken with faculty advisor approval.

Course Code	Title	Credits
BUSI 106	Contemporary Business	3
COMM 101	Introduction to Communication Studies	4
COMM 110	Mass Media and American Life	4
	ART 232 or ART 339	4
MKTG 221	Marketing Principles and Management	3
CSCI 156	Computer Science I	4
PSYC 101	Introduction to Psychology	4
ANTH 110	Cultural Anthropology	4
SOCI 110	Introduction to Sociology	4
Sub-Total Credits		16

University Requirements

The University Requirements must also be fulfilled, and will count towards the required minimum credits for this program:

- [Global Perspective \(GP\)](#)

- [Common Ground](#)
- [Lifetime Health and Wellness](#)

[MUSC 211](#) will fulfill the Global Perspective requirement. [DANC 120](#) is applied to the Lifetime Health & Wellness requirement.

Electives

Take as many general elective courses as needed to complete a total of 121 credits, except PFIT courses.

	Total Credits	121
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Interdisciplinary Performing Arts: Theatre BFA

The Bachelor of Fine Arts (BFA) in Theatre is an immersive, hands-on program designed for students who are passionate about exploring all aspects of theatre. This program focuses on developing students' skills in acting, directing, design, and stage management through practical experience and collaboration. Students will work closely with faculty and industry professionals in excellent facilities, gaining valuable exposure to real-world production environments.

The BFA in Theatre emphasizes creativity, innovation, and teamwork, offering students the opportunity to discover and refine their artistic voice while developing the technical expertise needed for success in the field. Students will participate in diverse theatre productions, from classical to contemporary works, gaining experience both onstage and behind the scenes.

Learning Outcomes for BFA in Theatre

- Creative Performance and Interpretation**
Students will demonstrate the ability to perform and interpret a wide range of theatrical works, applying diverse acting techniques and exploring various performance styles to create dynamic and engaging characters.
- Proficiency in Theatre Production**
Students will develop practical skills in many aspects of theatre production, including set design, lighting, sound, costume, and stage management, and will apply these skills to create cohesive, professional-quality productions.
- Directorial Vision and Collaboration**
Students will cultivate the ability to direct theatrical productions, effectively translating a script into a full performance while working collaboratively with actors, designers, and technicians to bring their vision to life.
- Adaptability and Innovation in Theatre Practice**
Students will demonstrate adaptability and innovation in their artistic practices, using creativity and problem-solving skills to overcome challenges in rehearsal, production, and performance.
- Professional Preparedness and Industry Engagement**
Students will develop the professional skills needed to succeed in the theatre industry, including effective communication, networking, and collaboration, while engaging with industry professionals and gaining real-world production experience.

BFA Theatre Course Requirements

Complete the following:

Course Code	Title	Credits
PERF 101	Core I: Making, Seeing, and Re	4
PERF 102	Core II: Making, Seeing, and Reflecting (Dance and Performance Design and Technology)	4
PERF 201	Living a Sustainable Life as a Professional Artist	4
PERF 230	Stage Management and the Art of Production Collaboration	4

THEA 145	Improvisation: Just Say Yes!	2
THEA 205	Playmaking	4
THEA 212	From Page to Stage: Script Analysis	4
THEA 240	Acting I	4
THEA 241	Vocal Production for Theatre	4
THEA 242	Collaborative Performance Lab	4
	THEA 251 Colloquium - take 6 times	6
	THEA 270 or THEA 370 Play Production - take 4 times	8
THEA 290	Acting in Verse	2
THEA 311	Classical World Theatre: History Art Politics & Society	4
THEA 312	Modern and Contemporary World Theatre: History Art Politics & Society	4
THEA 330	Directing I	4
THEA 340	Acting II	4
THEA 342	Intermediate Performance Lab	4
THEA 431	Directing II	4
THEA 442	Advanced Performanc Lba	4
THEA 496	Senior Project I: Development	2
THEA 497	Senior Project II: Execution	2
PDAT 120	Technical Theatre	4
PDAT 220	Design Fundamentals for Stage Dance and Film	4
PDAT 270	Play Production	2
	Class Piano or Class Guitar I	2
MUSC 130	Beginning Class Piano I	2
MUSC 135	Class Guitar I	2
	Class Piano or Class Guitar II	2
MUSC 131	Beginning Class Piano II	2
MUSC 136	Class Guitar II	2
MUSC 211	World Music	4
DANC 120	Fundamentals of Dance	2
DANC 225	Laban Movement Analysis	4
	ENGL 101 or ENGL 102	4
	SOAD: Humanities - Area B or D	4
	Electives - 8 credits any Performing Arts Courses	8
	Sub-Total Credits	126

In addition to the ENGL and SoAD Humanities listed above, the Academic Course requirement is fulfilled by: [THEA 212](#), [THEA 311](#), [THEA 496](#), and [MUSC 211](#).

University Requirements

The University Requirements must also be fulfilled, and will count towards the required minimum credits for this program:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

[MUSC 211](#) will fulfill the Global Perspective requirement. [DANC 120](#) and [DANC 225](#) fulfill the Lifetime Health & Wellness requirement.

	Total Credits	126
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Music BA

The Music Department, part of the Performing Arts Division, offers a Bachelor of Arts (BA) in Music providing students with a dynamic and flexible musical education within a liberal arts framework. The BA in Music fosters artistic growth, academic scholarship, and creative exploration, preparing students for a variety of career and graduate study opportunities.

This degree’s flexibility allows students to pursue a double major or dual degree, tailoring their academic experience to align with their interests and professional aspirations. Music majors who strategically complement their electives and complete a Business minor may also be eligible for admission into Alfred University’s MBA 4+1 program, enabling them to earn a Master of Business Administration with just one additional year of study.

Students engage in private applied instruction, diverse ensemble experiences including Orchestra, Choir, Concert Band, Jazz Band, Pop Music Ensemble, and chamber groups, as well as innovative music courses. The program culminates in a senior recital or capstone experience, allowing students to showcase their individual interests and creativity through their personal musical journey.

Upon completion of the BA in Music, students will be able to demonstrate the following:

- Musical Proficiency**
Students will demonstrate a comprehensive understanding of music theory, harmony, and structure by applying principles learned in Music Theory I and II to both written and aural musical examples, while showing proficiency in class piano or guitar.
- Historical and Cultural Knowledge**
Students will analyze and interpret the historical, cultural, and social contexts of music through coursework in Music History I and II, and demonstrate knowledge of diverse global and American musical traditions in elective courses such as World Music and American Popular Music.
- Performance and Technique**
Students will develop technical proficiency and artistic expression through private lessons and ensemble participation, demonstrating their ability to perform with both technical skill and creative interpretation in various musical genres.
- Critical Thinking and Research**
Students will engage in critical thinking and independent research, culminating in the Senior Recital or Capstone Project, where they synthesize knowledge gained throughout their coursework to explore a specific topic or area in music, demonstrating both scholarly and creative inquiry.
- Interdisciplinary Application**
Students will integrate their musical education with interdisciplinary knowledge gained through liberal arts courses, applying this broad perspective to enhance their artistic practice, with an emphasis on cultural awareness and global perspectives

All courses in major area must have a minimum grade of C.

Core Music Courses

Take all in this section:

Course Code	Title	Credits
MUSC 112	Fundamentals of Musicianship	1
MUSC 113	Creative Lab	1
MUSC 120	Music Theory I	4
MUSC 220	Music Theory II	4
MUSC 225	Western Music History I	4
MUSC 226	Music History II: Romanticism to the 20th Century	4
MUSC 495	Music Capstone-Research	2
MUSC 496	Music Capstone: Performance/Presentation	2
Sub-Total Credits		22

Lessons and Ensembles

Students are expected to take 2 semesters of either class piano or guitar lessons, 2 credits of beginning private lessons, 4 credits of advanced private lessons, and 10 credits of music ensembles.

Course Code	Title	Credits
Class Piano or Class Guitar I		2
MUSC 130	Beginning Class Piano I	2
MUSC 135	Class Guitar I	2
Class Piano or Class Guitar II		2
MUSC 131	Beginning Class Piano II	2
MUSC 136	Class Guitar II	2
Beginning Private Lessons		2
MUSC 101	Private Lessons-Piano	1
MUSC 102	Private Lessons-Voice	1
MUSC 103	Private Lessons-Brass	1
MUSC 104	Private Lessons-Woodwinds	1
MUSC 105	Private Lessons-Strings	1
MUSC 106	Private Lessons-Percussion	1
MUSC 107	Private Lessons-Guitar	1
Advanced Private Lessons		6
MUSC 301	Private Lessons-Piano Advanced	2
MUSC 302	Private Lessons-Voice Advanced	2
MUSC 303	Private Lessons-Brass Advanced	2
MUSC 304	Private Lessons-Woodwinds Advanced	2
MUSC 305	Private Lessons-Strings Advanced	2
MUSC 306	Private Lessons-Percussion Advanced	2
MUSC 307	Private Lessons-Guitar Advanced	2
Music Ensembles - Music BA		10
MUSC 271	University Chorus	2
MUSC 272	Encore Choir	2
MUSC 273	Concert Band	2

MUSC 274	Jazz Ensemble	2
MUSC 275	University Symphony Orchestra	2
MUSC 278	Tenor/Bass Chorus	2
MUSC 279	Chamber Music	1-2
MUSC 280	AU Popular Music Ensemble	2
Sub-Total Credits		22

Music Electives

Complete a minimum of 8 credits from the following courses:

Course Code	Title	Credits
MUSC 133	Music of the Guzheng	2
MUSC 200	Special Topics	1-4
MUSC 205	SOUND GATHERING: Music Sound and Environment	2
MUSC 211	World Music	4
MUSC 212	American Popular Music	4
MUSC 213	Introduction to Jazz	2
MUSC 214	Reel Music in America	4
MUSC 215	History of Rock Music	2
MUSC 219	Musical Reorientations:	4
MUSC 240	Songwriting and Composition	2
Sub-Total Credits		8

Academics

Music BA majors complete the Competencies and Areas of Knowledge for the [CLAS General Education Program](#), except for the (C) Arts and (D) Historical Studies areas which are filled by select music courses and [MUSC 225](#), respectively.

Sub-Total Credits	44
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University Requirements

The University Requirements must also be fulfilled, and will count towards the required minimum credits for this program:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

[MUSC 211](#) may fulfill the global perspective requirement.

Electives

Take as many general elective courses as needed to complete a total of 124 credits. 18 of these credits must academic courses, selected in consultation with an academic advisor.

Total Credits	124
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Music Double Major

The Double Major in Music provides students with a comprehensive foundation in music theory, history, performance, and creative practice while allowing them to pursue a primary academic discipline. This program is designed for students who seek to integrate their passion for music with another field of study.

Students engage in core coursework covering Music Theory, Music History, and Class Piano or Guitar, ensuring a well-rounded understanding of musical structure, historical context, and instrumental proficiency. Private lessons and participation in ensembles, provide hands-on experience in performance and collaboration.

The program culminates in a Capstone Project, allowing students to synthesize their learning through research and performance. Elective options encourage exploration of diverse musical traditions, sound studies, composition, and contemporary genres.

All courses in major area must have a minimum grade of C.

Core Music Courses

Take all in this section:

Course Code	Title	Credits
MUSC 112	Fundamentals of Musicianship	1
MUSC 113	Creative Lab	1
MUSC 120	Music Theory I	4
MUSC 220	Music Theory II	4
MUSC 225	Western Music History I	4
MUSC 226	Music History II: Romanticism to the 20th Century	4
MUSC 495	Music Capstone-Research	2
MUSC 496	Music Capstone: Performance/Presentation	2
	Sub-Total Credits	22

Lessons and Ensembles

Students are expected to take 2 semesters of either class piano or guitar lessons, 2 credits of beginning private lessons, 4 credits of advanced private lessons, and 10 credits of music ensembles.

Course Code	Title	Credits
	Class Piano or Class Guitar I	2
MUSC 130	Beginning Class Piano I	2
MUSC 135	Class Guitar I	2
	Class Piano or Class Guitar II	2
MUSC 131	Beginning Class Piano II	2
MUSC 136	Class Guitar II	2
	Beginning Private Lessons	2
MUSC 101	Private Lessons-Piano	1
MUSC 102	Private Lessons-Voice	1
MUSC 103	Private Lessons-Brass	1

MUSC 104	Private Lessons-Woodwinds	1
MUSC 105	Private Lessons-Strings	1
MUSC 106	Private Lessons-Percussion	1
MUSC 107	Private Lessons-Guitar	1
	Music Ensembles - Music BA	10
MUSC 271	University Chorus	2
MUSC 272	Encore Choir	2
MUSC 273	Concert Band	2
MUSC 274	Jazz Ensemble	2
MUSC 275	University Symphony Orchestra	2
MUSC 278	Tenor/Bass Chorus	2
MUSC 279	Chamber Music	1-2
MUSC 280	AU Popular Music Ensemble	2
	Sub-Total Credits	20

Music Electives

Complete a minimum of 8 credits from the following courses:

Course Code	Title	Credits
MUSC 133	Music of the Guzheng	2
MUSC 205	SOUND GATHERING: Music Sound and Environment	2
MUSC 211	World Music	4
MUSC 212	American Popular Music	4
MUSC 213	Introduction to Jazz	2
MUSC 214	Reel Music in America	4
MUSC 215	History of Rock Music	2
MUSC 219	Musical Reorientations:	4
MUSC 240	Songwriting and Composition	2
	Sub-Total Credits	8

Other courses may be considered and must be approved by the Associate Dean in consultation with the Music Faculty.

	Total Credits	50
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Music Minor

The Music Minor offers students the opportunity to explore their passion for music within a liberal arts curriculum while pursuing a major in another field. This program encourages creative expression and critical thinking through a diverse range of courses, ensembles, and applied private or group study. Students will engage with music from multiple perspectives, enhancing both their artistic growth and academic development.

All courses in major area must have a minimum grade of C.

Music History

4 credits to be chosen from the following:

Course Code	Title	Credits
MUSC 110	Music Appreciation	4
MUSC 211	World Music	4
MUSC 225	Western Music History I	4
MUSC 226	Music History II: Romanticism to the 20th Century	4
	Sub-Total Credits	4

Music Theory

2-4 credits to be chosen from the following:

Course Code	Title	Credits
MUSC 120	Music Theory I	4
	MUSC 112 and MUSC 113 Fundamentals of Musicianship and Creative Lab	2
	Sub-Total Credits	2-4

Music Skills Classes

10 credits to be chosen from the following:

Course Code	Title	Credits
MUSC 271	University Chorus	2
MUSC 273	Concert Band	2
MUSC 274	Jazz Ensemble	2
MUSC 275	University Symphony Orchestra	2
MUSC 279	Chamber Music	1-2
MUSC 280	AU Popular Music Ensemble	2
MUSC 281	Laptop Ensemble	2
MUSC 101	Private Lessons-Piano	1
MUSC 102	Private Lessons-Voice	1
MUSC 103	Private Lessons-Brass	1
MUSC 104	Private Lessons-Woodwinds	1
MUSC 105	Private Lessons-Strings	1
MUSC 106	Private Lessons-Percussion	1
MUSC 107	Private Lessons-Guitar	1
	Class Piano or Class Guitar I	2
MUSC 130	Beginning Class Piano I	2
MUSC 135	Class Guitar I	2
	Class Piano or Class Guitar II	2
MUSC 131	Beginning Class Piano II	2
MUSC 136	Class Guitar II	2

	Sub-Total Credits	10
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MUSC 101-107 Beginning Private Lessons may be taken twice for 2 credits total.

If class piano or guitar is taken, students are expected to complete both class I and class II.

Music Elective

A minimum 2 credits to be chosen from the following courses. More courses may be selected from the below should students need to make up credit difference due to testing out of required options above.

Course Code	Title	Credits
MUSC 132	Beginning Voice Class I	2
MUSC 133	Music of the Guzheng	2
MUSC 200	Special Topics	1-4
MUSC 205	SOUND GATHERING: Music Sound and Environment	2
MUSC 212	American Popular Music	4
MUSC 213	Introduction to Jazz	2
MUSC 214	Reel Music in America	4
MUSC 219	Musical Reorientations:	4
MUSC 220	Music Theory II	4
MUSC 301	Private Lessons-Piano Advanced	2
MUSC 302	Private Lessons-Voice Advanced	2
MUSC 303	Private Lessons-Brass Advanced	2
MUSC 304	Private Lessons-Woodwinds Advanced	2
MUSC 305	Private Lessons-Strings Advanced	2
MUSC 306	Private Lessons-Percussion Advanced	2
MUSC 307	Private Lessons-Guitar Advanced	2
	Sub-Total Credits	2
	Total Credits	20

Performance Design & Technology Minor

The Performance Design & Technology (PDAT) Minor offers students the chance to specialize in a key area of the performing arts while also engaging with a wide range of disciplines. This unique program allows students to extend their studies beyond theatrical design, exploring dance, performance art, site-specific work, and live entertainment. With strong ties to the theatre program, the minor provides students with greater opportunities and support as they develop their skills and pursue careers in the dynamic field of performance design and technology.

All courses in major area must have a minimum grade of C.

Required courses

Course Code	Title	Credits
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PDAT 120	Technical Theatre	4
PDAT 220	Design Fundamentals for Stage Dance and Film	4
PDAT 270	Play Production	2
THEA 212	From Page to Stage: Script Analysis	4
Sub-Total Credits		14

Minor electives

Select 4 credits from the following:

Course Code	Title	Credits
COMM 216	Video Production	4
PDAT 200	Special Topics in Performance Design and Technology	1-4
PDAT 221	Making with Fabric	4
PDAT 222	Stage Makeup	2
PDAT 223	Sound Design and Technology	4
PDAT 224	Entertainment Lighting: Electricity and Equipment	2
PDAT 225	Woodworking Techniques for the Stage	2
PDAT 226	Scenic Painting	2
PDAT 228	Costume Design for Dance	2
PDAT 229	Transforming Fabric	4
PDAT 231	Prop Design and Construction	2
PDAT 315	Advanced Design Seminar: Design is Dramaturgy	2
PDAT 320	Scene Design	2
PDAT 321	Lighting Design	2
PDAT 322	Costume Design	2
PDAT 330	Costuming on the Half Scale	4
PDAT 450	Independent Study	1-4
PERF 230	Stage Management and the Art of Production Collaboration	4
Sub-Total Credits		4
Total Credits		18

Theatre BA

The Theatre program, part of the Performing Arts Division, offers a Bachelor of Arts (BA) in Theatre. This program provides a well-rounded theatrical education within a liberal arts framework, fostering both artistic growth and academic scholarship.

Through coursework, hands-on production experiences, and mentorship from faculty who are active professionals in the field, students develop a comprehensive understanding of theatre's many components, including performance, design, directing, and production. Offering rigorous training, excellent facilities, and a dedicated mentor model of teaching, the Theatre program provides a unique experience that prepares young artists for both graduate study and the world of contemporary theatre.

Upon completion of the BA in Theatre, students will be able to demonstrate the following:

1. **Theatrical Foundations & Performance**
Demonstrate proficiency in acting, voice, and movement techniques while applying fundamental theories of theatre performance in a variety of live and digital formats.
2. **Theatre History & Analysis**
Analyze the historical, cultural, and theoretical contexts of theatre, demonstrating an understanding of how theatrical traditions have evolved and their impact on contemporary performance.
3. **Design & Production**
Apply principles of theatrical design, stagecraft, and production management, integrating technical and creative skills to support live performances.
4. **Collaboration & Interdisciplinary Integration**
Work effectively in ensemble-based and interdisciplinary settings, fostering collaboration across theatre, music, dance, and performance design to create innovative productions.
5. **Creative Inquiry & Professional Development**
Develop original creative work, demonstrating problem-solving, adaptability, and communication skills that prepare students for careers in theatre or further academic study.

Core Major Requirements

Complete the following:

Course Code	Title	Credits
THEA 145	Improvisation: Just Say Yes!	2
THEA 212	From Page to Stage: Script Analysis	4
THEA 240	Acting I	4
THEA 241	Vocal Production for Theatre	4
THEA 242	Collaborative Performance Lab	4
THEA 251	Theatre Colloquium	1
THEA 270	Play Production	2
THEA 290	Acting in Verse	2
THEA 311	Classical World Theatre: History Art Politics & Society	4
THEA 312	Modern and Contemporary World Theatre: History Art Politics & Society	4
THEA 330	Directing I	4
THEA 340	Acting II	4
THEA 370	Advanced Play Production	2
THEA 495	Senior Project	2-4
DANC 120	Fundamentals of Dance	2
MUSC 211	World Music	4
PDAT 120	Technical Theatre	4
PERF 101	Core I: Making, Seeing, and Re	4
PERF 201	Living a Sustainable Life as a Professional Artist	4
Sub-Total Credits		61-63

Theatre Elective

Complete 4 credits from the following list of courses:

Course Code	Title	Credits
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ENGL 214	Literature in Action: Drama Self & Society	2-4
ENGL 411	Shakespeare's Comedies and Histories	4
ENGL 412	Shakespeare's Tragedies	4
DANC 226	Hip Hop Dance	2
DANC 223	Jazz Dance I	2
DANC 230	Improvisation/Composition I	4
DANC 330	Improvisation/Composition II	4
DANC 322	Modern Dance II	2
DANC 323	Jazz Dance II	2
MUSC 102	Private Lessons-Voice	1
MUSC 132	Beginning Voice Class I	2
MUSC 302	Private Lessons-Voice Advanced	2
THEA 205	Playmaking	4
THEA 230	Stage Management and the Art of Production Collaboration	4
THEA 340	Acting II	4
THEA 385	Internship in Theatre	2-4
THEA 440	Acting III	3
THEA 431	Directing II	4
PDAT 220	Design Fundamentals for Stage Dance and Film	4
PDAT 221	Making with Fabric	4
PDAT 222	Stage Makeup	2
PDAT 223	Sound Design and Technology	4
PDAT 320	Scene Design	2
PDAT 321	Lighting Design	2
PDAT 322	Costume Design	2
PDAT 385	Internship in Performance Design and Technology	1-4
Sub-Total Credits		4

Academic Courses

Theater BA majors complete the Competencies and Areas of Knowledge for the [CLAS General Education Program](#), except for the (C) Arts and (D) Historical Studies areas which are filled by select THEA courses and [THEA 311](#), respectively.

Sub-Total Credits	44
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University Requirements

- The University Requirements must also be fulfilled, and will count towards the required minimum credits for this program:
- [Global Perspective \(GP\)](#)
 - [Common Ground](#)
 - [Lifetime Health and Wellness](#)

[MUSC 211](#) will fulfill the Global Perspective requirement. [DANC 120](#) and [THEA 145](#) will fulfill the Lifetime Health & Wellness requirement.

Electives

Take as many general elective courses as needed to complete a total of 124 credits (any course except private lessons, ensembles, or PFIT courses)

	Total Credits	124
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Theatre Double Major

The Double Major in Theatre offers students a dynamic and interdisciplinary approach to the study and practice of performance. Designed for those who want to pursue their passion for theatre in addition to their primary academic discipline, this program provides a strong foundation in acting, directing, script analysis, theatre history, vocal production, and technical theatre. Students engage in core coursework gaining both theoretical knowledge and hands-on experience. The program also includes a colloquium for ongoing artistic development and culminates in a Senior Project that allows students to showcase their growth as theatre artists.

With additional opportunities to explore electives in playwriting, improvisation, design, stage management, and dance, students tailor their experience to their individual interests and career aspirations. Whether pursuing performance, directing, and production, this program equips students with the critical thinking, collaboration, and creative problem-solving skills necessary for success in the arts and beyond.

All courses in major area must have a minimum grade of C.

Required courses

Complete the following:

Course Code	Title	Credits
THEA 212	From Page to Stage: Script Analysis	4
THEA 240	Acting I	4
THEA 241	Vocal Production for Theatre	4
THEA 242	Collaborative Performance Lab	4
THEA 270	Play Production	2
THEA 311	Classical World Theatre: History Art Politics & Society	4
THEA 312	Modern and Contemporary World Theatre: History Art Politics & Society	4
THEA 330	Directing I	4
THEA 495	Senior Project	2-4
PDAT 120	Technical Theatre	4
PDAT 270	Play Production	2
	Sub-Total Credits	44

Theatre Elective

Complete 6 credits from the following list of courses:

Course Code	Title	Credits
DANC 120	Fundamentals of Dance	2
THEA 145	Improvisation: Just Say Yes!	2
THEA 205	Playmaking	4
THEA 290	Acting in Verse	2
THEA 340	Acting II	4
THEA 431	Directing II	4
PDAT 220	Design Fundamentals for Stage Dance and Film	4
PERF 230	Stage Management and the Art of Production Collaboration	4
Sub-Total Credits		6

Other courses may be considered; must be approved by the Associate Dean of Performing Arts in collaboration with the Theatre Faculty

Total Credits	50
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Theatre Minor

The Theatre Minor offers students the opportunity to explore the art of theatre within a liberal arts curriculum. Through a combination of coursework, performance, and production experiences, students gain a foundational understanding of acting, design, directing, and theatre history. This minor enhances students' creative and analytical skills, making it an ideal complement to a variety of academic disciplines.

All courses in major area must have a minimum grade of C.

Required courses

Course Code	Title	Credits
THEA 212	From Page to Stage: Script Analysis	4
THEA 240	Acting I	4
THEA 270	Play Production	2
THEA 311	Classical World Theatre: History Art Politics & Society	4
Sub-Total Credits		14

Minor electives

Select 6 credits from the following courses:

Course Code	Title	Credits
PERF 230	Stage Management and the Art of Production Collaboration	4
THEA 120	Technical Theatre	4
THEA 145	Improvisation: Just Say Yes!	2
THEA 205	Playmaking	4
THEA 242	Collaborative Performance Lab	4

THEA 290	Acting in Verse	2
THEA 312	Modern and Contemporary World Theatre: History Art Politics & Society	4
THEA 330	Directing I	4
THEA 340	Acting II	4
THEA 370	Advanced Play Production	2
THEA 431	Directing II	4
Sub-Total Credits		6

*Other courses may be considered and must be approved by the Associate Dean in collaboration with the Theatre Faculty.

Total Credits	20
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Kazuo Inamori School of Engineering

Overview

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 Biomaterials Engineering (BMEG), 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 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

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.

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.

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.

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.

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 [CHEM 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.

Departments/Divisions

Ceram/Glass/Matls/Biomatls Egr

Biomaterials Engineering (BMEG) BS

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.

Engineering Core

All engineering students complete the [Engineering Core](#), a cohesive sequence of foundational courses in mathematics, science, engineering principles, and applied learning. The Biomaterials Engineering (BMEG) major builds upon this foundation with specialized coursework and tailored hands-on experiences.

	Sub-Total Credits	56
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Biomaterials Engineering (BMEG) Major Requirements

Course Code	Title	Credits
BIOL 150	Biological Foundations	4
BIOL 211	Cell Biology	4
BIOL 211L	Laboratory-Cell Biology	0
CEMS 214	Structure and Properties of Materials	3
CEMS 215	Microscopy and Microstructural Characterization	3
CEMS 215L	Laboratory-Microstruct Charact	0

CEMS 216	Bonding and Structure of Materials	3
CEMS 235	Thermodynamics of Materials	4
CEMS 237	Thermal Processes in Materials	4
CEMS 334	Introduction to Polymers	3
CEMS 336	Physical Metallurgy I	3
CEMS 342	Thermal and Mechanical Properties	4
CEMS 344	Properties II: Electrical Magnetic and Optical	4
CEMS 368	Introduction to Bioengineering	3
CEMS 460	Biology for Engineers	3
CEMS 465	Biocompatibility	4
CEMS 468	Biomedical Materials	3
CHEM 310	Basic Organic Chemistry	3
MECH 211	Statics	3
MECH 241	Mechanics of Materials	3
Sub-Total Credits		61

[CHEM 315](#) or [CHEM 316](#) may substitute for [CHEM 310](#).

Biomaterials Engineering (BMEG) Technical Electives

Take 9 credits, at least 6 of which must be program specific electives

Course Code	Title	Credits
BMEG Program-Specific Electives		6
BCHM 320	Toxicology	4
BCHM 420	Biochem: Proteins & Metabolism	4
BCHM 422	BioChem: Nucleic Acids	4
BIOL 302	General Microbiology	4
BIOL 306	Human Pathophysiology	4
BIOL 307	Anatomy and Physiology: Nerves Muscles Skeleton	4
BIOL 308	Anatomy and Physiology: Viscera	4
BIOL 320	Toxicology	4
BIOL 376	Animal Physiology	4
BIOL 402	Immunology	4
BIOL 405	Bioinformatics	4
BIOL 420	Biochemistry: Proteins and Metabolism	4
BIOL 422	Biochemistry: Nucleic Acids	4

Other options include: non-required CEMS 36x or 46x, BCHM, BIOL, or CEMS Topics, Independent Study, and ENGR 385/ Internship if pre-approved by the C&T committee.

BMEG Technical Electives		3
Sub-Total Credits		9

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.

Engineering General Education Requirements

Engineering students must complete the [Engineering General Education Requirements](#).

	Sub-Total Credits	9
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

	Total Credits	135
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Biomaterials Engineering (BMEG) Minor

Requirements for the Biomaterials Minor

Course Code	Title	Credits
BIOL 211	Cell Biology	4
CEMS 214	Structure and Properties of Materials	3
CEMS 368	Introduction to Bioengineering	3
	CEMS 465 or CEMS 468	3
	CHEM 310, CHEM 315, or CHEM 316	3
	Sub-Total Credits	16

Plus 2 courses from the following list:

Course Code	Title	Credits
BIOL 302	General Microbiology	4
BIOL 307	Anatomy and Physiology: Nerves Muscles Skeleton	4
BIOL 308	Anatomy and Physiology: Viscera	4
BIOL 375	Comparative Vertebrate Anatomy	4
BIOL 376	Animal Physiology	4
BIOL 420	Biochemistry: Proteins and Metabolism	4
BIOL 422	Biochemistry: Nucleic Acids	4
CEMS 460	Biology for Engineers	3
	Sub-Total Credits	7-8

	Total Credits	23
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Ceramic Engineering (CEGR) BS

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.

Engineering Core

All engineering students complete the [Engineering Core](#), a cohesive sequence of foundational courses in mathematics, science, engineering principles, and applied learning. The Ceramic Engineering (CEGR) major builds upon this foundation with specialized coursework and tailored hands-on experiences.

	Sub-Total Credits	58
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Ceramic Engineering (CEGR) Major Requirements

Course Code	Title	Credits
CEMS 203	Introduction to Ceramic Powder Processing	3
CEMS 214	Structure and Properties of Materials	3
CEMS 215	Microscopy and Microstructural Characterization	3

CEMS 215L	Laboratory-Microstruct Charact	0
CEMS 216	Bonding and Structure of Materials	3
CEMS 235	Thermodynamics of Materials	4
CEMS 237	Thermal Processes in Materials	4
CEMS 314	Ceramic Processing Principles	3
CEMS 317	Sintering	3
CEMS 322	Introduction to Glass Science	3
CEMS 342	Thermal and Mechanical Properties	4
CEMS 344	Properties II: Electrical Magnetic and Optical	4
CEMS 349	X-ray Characterization	2
CEMS 349L	Laboratory-X-Ray Charact	0
ENGR 104	Computer Aided Engineering	2
ENGR 220	Circuit Theory I	4
ENGR 220L	Laboratory-Circuit Theory I	0
MECH 211	Statics	3
MECH 241	Mechanics of Materials	3
Sub-Total Credits		51

Ceramic Engineering (CEGR) Technical Electives

Take 9 credits, at least 6 of which must be program specific electives

Course Code	Title	Credits
CEGR program-specific electives		6
CEMS 316	Chemical Processing in Ceramics	3
CEMS 318	Refractories	3
CEMS 325	Glass Laboratory	2
CEMS 328	Industrial Glass and Coatings on Glass	3
CEMS 352	Electroceramics	3
CEMS 411	Science of Whitewares	3
CEMS 415	Porcelain Enamels	3
CEMS 438	Nanotechnology	3
CEMS 468	Biomedical Materials	3
ENGR 408	Statistics for Manufacturing	3
CEGR Technical Electives		3
Sub-Total Credits		9

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

Engineering General Education Requirements

Engineering students must complete the [Engineering General Education Requirements](#).

University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

	Total Credits	118
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Glass Engineering Science (GLES) BS

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 cannot 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 is not 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. In what may be a very short time, 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.

Engineering Core

All engineering students complete the [Engineering Core](#), a cohesive sequence of foundational courses in mathematics, science, engineering principles, and applied learning. The Glass Engineering Science (GLES) major builds upon this foundation with specialized coursework and tailored hands-on experiences.

	Sub-Total Credits	58
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Glass Engineering Science (GLES) Major Requirements

Course Code	Title	Credits
CEMS 214	Structure and Properties of Materials	3
CEMS 215	Microscopy and Microstructural Characterization	3
CEMS 215L	Laboratory-Microstruct Charact	0
CEMS 216	Bonding and Structure of Materials	3
	CEMS 235 or MECH 320	3-4
CEMS 237	Thermal Processes in Materials	4
CEMS 322	Introduction to Glass Science	3
CEMS 325	Glass Laboratory	2
CEMS 325L	Laboratory-Glass Lab	0
CEMS 328	Industrial Glass and Coatings on Glass	3
CEMS 342	Thermal and Mechanical Properties	4
CEMS 344	Properties II: Electrical Magnetic and Optical	4
CEMS 347	Spectroscopy	2
CEMS 347L	Laboratory-Spectroscopy	0
CEMS 349	X-ray Characterization	2
CEMS 349L	Laboratory-X-Ray Charact	0
CEMS 423	Mass Transport in Glasses and Melts	3
ENGR 104	Computer Aided Engineering	2
	ELEC 220, ELEC 223, ELEC 325, or ENGR 220	2-4
ENGR 220L	Laboratory-Circuit Theory I	0
MECH 211	Statics	3
MECH 241	Mechanics of Materials	3
	Sub-Total Credits	49-52

Glass Engineering Science (GLES) Technical Electives

Take 9 credits, at least 6 of which must be program specific electives

Course Code	Title	Credits
	GLES Program-Specific Electives	6
	GLES Technical Electives	3
	Sub-Total Credits	9

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.

Engineering General Education Requirements

Engineering students must complete the [Engineering General Education Requirements](#).

University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

	Total Credits	130
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Glass Engineering Science (GLES) Minor

Requirements for the Glass Science Minor

Course Code	Title	Credits
CEMS 322	Introduction to Glass Science	3
CEMS 325	Glass Laboratory	2
	Sub-Total Credits	5

Plus at least 9 credits from the following list:

Course Code	Title	Credits
CEMS 305	Computational Materials	2
CEMS 326	Natural Glasses	3
CEMS 328	Industrial Glass and Coatings on Glass	3
CEMS 397	Glassartengine	2
CEMS 415	Porcelain Enamels	3
CEMS 420	Optics and Photonics	3
CEMS 423	Mass Transport in Glasses and Melts	3
CEMS 426	Advanced Glass Science	3
CEMS 450	Independent Study	1-3
ENGR 480	Senior Capstone Individual Project	2
COOP 385	Cooperative Education	3
PHYS 408	Physics of Glass	4
	Sub-Total Credits	9

	Total Credits	14
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Materials Science and Engineering (MATS) BS

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.

Engineering Core

All engineering students complete the [Engineering Core](#), a cohesive sequence of foundational courses in mathematics, science, engineering principles, and applied learning. The Materials Science and Engineering (MATS) major builds upon this foundation with specialized coursework and tailored hands-on experiences.

	Sub-Total Credits	58
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Materials Science and Engineering (MATS) Major Requirements

Course Code	Title	Credits
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CEMS 214	Structure and Properties of Materials	3
CEMS 215	Microscopy and Microstructural Characterization	3
CEMS 215L	Laboratory-Microstruct Charact	0
CEMS 216	Bonding and Structure of Materials	3
	CEMS 235 or MECH 320	3-4
CEMS 237	Thermal Processes in Materials	4
	CEMS 314 or CEMS 316	3
CEMS 322	Introduction to Glass Science	3
CEMS 334	Introduction to Polymers	3
CEMS 336	Physical Metallurgy I	3
CEMS 342	Thermal and Mechanical Properties	4
CEMS 344	Properties II: Electrical Magnetic and Optical	4
CEMS 347	Spectroscopy	2
CEMS 347L	Laboratory-Spectroscopy	0
CEMS 349	X-ray Characterization	2
CEMS 349L	Laboratory-X-Ray Charact	0
CEMS 446	Mechanics of Composites	3
ENGR 104	Computer Aided Engineering	2
	ELEC 220 or ENGR 220 or ELEC 223 and ELEC 325	4
ENGR 220L	Laboratory-Circuit Theory I	0
MECH 211	Statics	3
MECH 241	Mechanics of Materials	3
	Sub-Total Credits	55-56

Materials Science and Engineering (MATS) Technical Electives

Take 6 credits

Course Code	Title	Credits
	MATS Technical Electives	6
	Sub-Total Credits	6

Engineering General Education Requirements

Engineering students must complete the [Engineering General Education Requirements](#).

University Requirement

The university requirements must also be fulfilled, but do not count towards the 120 credit total for College of Business degrees. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Wellness](#)

	Total Credits	119-120
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Materials Science and Engineering (MATS) Minor

Requirements for the Materials Science Minor

Course Code	Title	Credits
CEMS 214	Structure and Properties of Materials	3
CEMS 216	Bonding and Structure of Materials	3
	CEMS 235, CHEM 343, or MECH 320	3-4
	Sub-Total Credits	9-10

Plus at least 6 credits from the following list:

- 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
- or:

Course Code	Title	Credits
CEMS 237	Thermal Processes in Materials	4
	Sub-Total Credits	6

Note: The Materials Science Minor is not available to students majoring in Biomaterials Engineering, Ceramic Engineering, or Glass Engineering Science.

	Total Credits	15-16
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Engineering

Engineering Core

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 Core Courses

All students in the School of Engineering complete the following required courses.

Course Code	Title	Credits
CHEM 105	General Chemistry I	3
CHEM 105L	General Chemistry I Laboratory	1
CHEM 106	General Chemistry II	3
CHEM 106L	General Chemistry II Laboratory	1
MATH 151	Calculus I	4
MATH 152	Calculus II	4
MATH 253	Calculus III	4
MATH 271	Differential Equations	3
PHYS 125	Physics I	4
PHYS 125L	Laboratory-Physics I	0
PHYS 126	Physics II	4
PHYS 126L	Laboratory-Physics II	0
ENGL 101	Writing I	4
ENGR 101	Introduction to Engineering	2
ENGR 102	Computer Aided Design	2
ENGR 110	Technical Communications	4
ENGR 117	Engineering Foundations	2
ENGR 117L	Lab-Engineering Foundations II	0
ENGR 305	Engineering Statistics	3
ENGR 306	Engineering Economics	2
ENGR 395	Engineering Design	2
ENGR 480	Senior Capstone Individual Project	2
Sub-Total Credits		56

ENGR 480: This course is taken twice over the final two semesters for a cumulative total of 4 credits.

	Total Credits	56
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Engineering 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 all SoE students
- [Biomaterials Engineering](#), available to all SoE students
- [Electrical Engineering](#), available to all SoE students
- [Renewable Engineering](#), available to all SoE students

Inamori School of Engineering: Double Majors and Minors could double major in:

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	Yes	Yes	Yes	Yes	NA

Inamori School of Engineering: Double Majors and Minors could minor in:

Majors	BMEG	CEGR	EEGR	GLES	MATS	MEGR	RNEW
BMEG	No	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

All degrees are BS

Mech/Elec/Renewble Energy Engr

Electrical Engineering (EEGR) BS

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.

Engineering Core

All engineering students complete the [Engineering Core](#), a cohesive sequence of foundational courses in mathematics, science, engineering principles, and applied learning. The EEGR foundation includes an additional course, [ENGR 104](#). The Electrical Engineering (EEGR) major builds upon this foundation with specialized coursework and tailored hands-on experiences.

Course Code	Title	Credits
ENGR 104	Computer Aided Engineering	2
Sub-Total Credits		60

Electrical Engineering (EEGR) Major Requirements

Course Code	Title	Credits
	RNEW 303 or CSCI 156	3
ELEC 210	Digital Logic	4
ELEC 210L	Laboratory-Digital Logic	0
ELEC 310	Microprocessor Systems and Applications	4
ELEC 320	Circuit Theory II	4

ELEC 320L	Laboratory-Circuit Theory II	0
ELEC 354	Device Electronics	3
ELEC 356	Electronic Circuits	4
ELEC 356L	Laboratory-Electronic Circuits	0
ENGR 220	Circuit Theory I	4
ENGR 220L	Laboratory-Circuit Theory I	0
MATH 361	Complex Variables	4
MATH 371	Linear Algebra	4
MATH 381	Mathematical Statistics	4
MATH 401	Advanced Engineering Mathematics	4
MECH 320	Thermodynamics I	3
RNEW 322	Signals and Systems	3
RNEW 468	Electric Machinery	3
	Sub-Total Credits	51

Electrical Engineering (EEGR) Technical Electives

Students must complete a total of four courses, selecting two courses each from two different sequences.

Course Code	Title	Credits
Computer Engineering		
Computer Engineering		
CSCI 225	Computer Organization	4
CSCI 305	Theory of Computation	4
CSCI 311	Database Systems	4
CSCI 315	Computer Networking	4
CSCI 425	Operating Systems	4
	Controls	
ELEC 422	Control Systems	3
ELEC 423	Digital Controls	3
	Renewable Energy	
RNEW 310	Fuel Cell Principles and Technology	3
RNEW 431	Wind Energy	3
RNEW 432	Solar Energy Systems	3
RNEW 461	Power Electronics for Renewable Systems	3
	Power Engineering	
ELEC 355	Power System Operations and Economics	3
RNEW 410	Advanced Power Systems	3
	Sub-Total Credits	12-14

[ELEC 355](#) is crosslisted with [RNEW 355](#)

Engineering General Education Requirements

Engineering students must complete the [Engineering General Education Requirements](#).

University Requirement

The university requirements must also be fulfilled, but do not count towards the 120 credit total for College of Business degrees. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Wellness](#)

	Total Credits	133-135
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Electrical Engineering (EEGR) Minor

Required courses

Course Code	Title	Credits
	RNEW 303 or CSCI 156	3
ELEC 210	Digital Logic	4
	ELEC 220 or ELEC 223 and ELEC 325	4
	Sub-Total Credits	11

Minor electives

Complete at least 10 credits from the following list.

Course Code	Title	Credits
ELEC 310	Microprocessor Systems and Applications	4
ELEC 320	Circuit Theory II	4
ELEC 330	Python for Power Systems	1
ELEC 354	Device Electronics	3
ELEC 355	Power System Operations and Economics	3
ELEC 356	Electronic Circuits	4
ELEC 422	Control Systems	3
ELEC 433	Modern Electrical Grids and Electricity Markets for 100% Renewable	1
ELEC 441	Advanced Power Electronics	1
ELEC 442	Applied Electromagnetism	3
ELEC 454	Advanced Transmission and Distribution Systems	1
	Sub-Total Credits	10
	Total Credits	21

Mechanical Engineering (MEGR) BS

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, online 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.

Engineering Core

All engineering students complete the [Engineering Core](#), a cohesive sequence of foundational courses in mathematics, science, engineering principles, and applied learning. The Mechanical Engineering (MEGR) major builds upon this foundation with specialized coursework and tailored hands-on experiences.

	Sub-Total Credits	56
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Mechanical Engineering (MEGR) Major Requirements

Course Code	Title	Credits
CEMS 214	Structure and Properties of Materials	3
ENGR 104	Computer Aided Engineering	2
ENGR 220	Circuit Theory I	4
ENGR 220L	Laboratory-Circuit Theory I	0
MATH 371	Linear Algebra	4
MECH 211	Statics	3
MECH 212	Dynamics	3
MECH 241	Mechanics of Materials	3
MECH 320	Thermodynamics I	3
MECH 321	Thermodynamics II	3
MECH 324	Fluid Mechanics I	3
MECH 326	Heat Transfer	3
MECH 327	Thermal Sciences Laboratory	2
MECH 343	Mechanics of Materials Laboratory	2
MECH 343L	Laboratory-Mech of Matls Lab	0
MECH 362	Kinematics and Dynamics of Machinery	3
MECH 364	Machine Design I	3
MECH 366	Manufacturing	3
MECH 366L	Laboratory-Manufacturing	0
MECH 417	Introduction to Finite Element Analysis	3
	Sub-Total Credits	50

Mechanical Engineering (MEGR) Technical Electives

Take 9 credits, at least 6 of which must be program specific electives

Course Code	Title	Credits
	MEGR Specific Electives	6

Any non-required MECH 4xy course, [ENGR 385](#)/Internship if approved by the C&T committee, or:

MECH 415	Mechanical Vibrations I	3
MECH 422	Control Systems	3
MECH 424	Fluid Mechanics II	3
MECH 434	Heating Ventilation and Air Conditioning	3
MECH 435	Industrial Control via Microcontroller	3
MECH 438	Alternative Vehicle Energy Control and Powertrain Design	3
MECH 448	Mechanics of Composite Materials	3
MECH 486	Modeling and Simulation of Dynamic Systems	3
RNEW 310	Fuel Cell Principles and Technology	3
RNEW 322	Signals and Systems	3
RNEW 431	Wind Energy	3
RNEW 432	Solar Energy Systems	3
PHYS 421	Statistical Mechanics	4
PHYS 423	Classical Mechanics	4
ENGR 484	Optimization Methods in Engineering	3
CEMS 438	Nanotechnology	3
CEMS 446	Mechanics of Composites	3
	MEGR Technical Electives	3
	Sub-Total Credits	9

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.

Engineering General Education Requirements

Engineering students must complete the [Engineering General Education Requirements](#).

	Sub-Total Credits	9
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

	Total Credits	129
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Mechanical Engineering (MEGR) Minor

Requirements for the Mechanical Engineering Minor

Choice of 300 or 400-level MECH course or:

Course Code	Title	Credits
MECH 211	Statics	3
MECH 212	Dynamics	3
MECH 241	Mechanics of Materials	3
	CEMS 204, CEMS 235, or MECH 320	3-4
MECH 324	Fluid Mechanics I	3
MECH 326	Heat Transfer	3
	Sub-Total Credits	18-19
	Total Credits	21

Renewable Energy Engineering (RNEW) BS

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.

Engineering Core

All engineering students complete the [Engineering Core](#), a cohesive sequence of foundational courses in mathematics, science, engineering principles, and applied learning. The Renewable Energy Engineering (RNEW) major builds upon this foundation with specialized coursework and tailored hands-on experiences.

	Sub-Total Credits	56
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Renewable Energy Engineering (RNEW) Major Requirements

Course Code	Title	Credits
ELEC 320	Circuit Theory II	4
ELEC 320L	Laboratory-Circuit Theory II	0
ENGR 104	Computer Aided Engineering	2
ENGR 220	Circuit Theory I	4
ENGR 220L	Laboratory-Circuit Theory I	0
MECH 212	Dynamics	3
MECH 320	Thermodynamics I	3
MECH 324	Fluid Mechanics I	3
MECH 326	Heat Transfer	3
MECH 354	Mechatronics	3
MECH 422	Control Systems	3
MECH 435	Industrial Control via Microcontroller	3
RNEW 201	Renewable Energy	3
	RNEW 303 or CSCI 156	3
RNEW 310	Fuel Cell Principles and Technology	3
	ELEC 322 or RNEW 322	3
RNEW 355	Power System Operation and Economics	3
RNEW 431	Wind Energy	3
RNEW 432	Solar Energy Systems	3
RNEW 468	Electric Machinery	3
	Sub-Total Credits	55

Renewable Energy Engineering (RNEW) Technical Electives

Take 6 credits of technical electives:

Course Code	Title	Credits
	RNEW Technical Electives	6
	Sub-Total Credits	6

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.

Engineering General Education Requirements

Engineering students must complete the [Engineering General Education Requirements](#).

	Sub-Total Credits	9
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University Requirement

The university requirements must also be fulfilled, and will count towards the minimum credit requirement for this program. These include:

- [Global Perspective \(GP\)](#)
- [Common Ground](#)
- [Lifetime Health and Wellness](#)

	Total Credits	132
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Renewable Energy Engineering (RNEW) Minor

Requirements for the Renewable Energy Engineering Minor

Course Code	Title	Credits
RNEW 201	Renewable Energy	3
MECH 324	Fluid Mechanics I	3
MECH 326	Heat Transfer	3
	Sub-Total Credits	9

Plus at least 6 credits from the following list:

- ELEC 3xx or RNEW 3xx: Any regularly scheduled ELEC or RNEW course at 300-level except special topics and independent study
- ELEC 4xx or RNEW 4xx Any regularly scheduled ELEC or RNEW course at 400-level except special topics and independent study
- or:

Course Code	Title	Credits
CEMS 352	Electroceramics	3
RNEW 310	Fuel Cell Principles and Technology	3
RNEW 431	Wind Energy	3
RNEW 432	Solar Energy Systems	3
	Sub-Total Credits	6

	Total Credits	15
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Courses

ACCT 200: Special Topics in Accounting

Topics not covered in other accounting courses are presented.

Credits	1-4
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ACCT 211: Financial Accounting

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. Sophomore or higher class standing.

Credits	3
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ACCT 212: Managerial Accounting

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.

Credits	3
Prerequisites	ACCT 211

ACCT 300: Special Topics in Accounting

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](#).

Credits	1-4
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ACCT 310: Forensic Accounting Introduction

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.

Credits	3
Prerequisites	ACCT 211

ACCT 320: Accounting-Healthcare Mgmt

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.

Credits	3
Prerequisites	ACCT 211 , ACCT 212

ACCT 361: Intermediate Accounting I

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.

Credits	3
Prerequisites	
ACCT 211	

ACCT 362: Intermediate Accounting II

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.

Credits	3
Prerequisites	
ACCT 361	

ACCT 371: Personal Income Tax

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. Junior standing (Fall)

Credits	3
Prerequisites	
ACCT 211	
Semester Offered	Fall

ACCT 372: Cost Accounting

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.

Credits	3
Prerequisites	
ACCT 212 , ECON 201	

ACCT 400: Special Topics

This course details major issues in the field of accountancy with primary topics changing from semester to semester. May be taken more than once for credit.

Credits	3
Prerequisites	
6 Hours of Accounting	

ACCT 441: Auditing Theory and Practice

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.

Credits	3
Degree Attributes	CoB: Field Experience AU: Service Learning Courses
Prerequisites	
ACCT 362 prev or concurrently	

ACCT 450: Independent Study

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.

Credits	1-4
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ACCT 460: Seminar in Accountancy

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.

Credits	3
Prerequisites	
6 Hours of Accounting	

ACCT 462: Advanced Accounting

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.

Credits	3
Prerequisites	
<u>ACCT 362</u>	

ACCT 471: Corporate Taxation

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.

Credits	3
Prerequisites	
<u>ACCT 371</u>	

ACCT 485: Internship

Credits	1-4
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AFRI 300: Topics: Africana Studies

Credits	1-4
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ANTH 110: Cultural Anthropology

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.

Credits	4
Degree Attributes	CLAS: (E3) Soc Sci-Soc/Anth AU: Global Perspective CoB: Social Science SoAD: Humanities-'Other'

ANTH 120: Human Origins

An introduction to physical anthropology surveying evolutionary theory as applied to humans. Special emphasis on non-human primates; fossil man (hominid evolution) and the diversity of modern human populations.

Credits	4
Degree Attributes	CLAS: (E3) Soc Sci-Soc/Anth CoB: Social Science

ANTH 200: Special Topics

An open course varying in content from year to year which allows concentration in specialized areas.

Credits	1-4
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ANTH 217: Intro. to Ethno/Musicology

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts CLAS: (E3) Soc Sci-Soc/Anth CoB: Humanities SoAD: Humanities

ANTH 240: Culture Through Film

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.

Credits	4
Degree Attributes	AU: Global Perspective
Prerequisites	
ANTH 110	

ANTH 300: Special Topics

An open course varying in content from year to year which allows concentration in specialized areas.

Credits	1-4
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ANTH 302: The Nacirema

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.

Credits	4
Degree Attributes	CoB: Social Science

ANTH 303: Health and Culture

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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Social Science
Prerequisites	
ANTH 110	

ANTH 304: Language and Culture

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. Recommended: 200-level foreign language course.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Social Science
Prerequisites	
ANTH 110	

ANTH 309: Magic and Religion

An examination of the diversity to be found among human religious beliefs and practices. Includes the relationship between magic; science and religion; the functions of witchcraft; divination and spirit possession and the role of religion in cultural revitalization. (Offered on demand)

Credits	4
Degree Attributes	AU: Global Perspective CoB: Social Science
Prerequisites	
ANTH 110	
Semester Offered	Offered on demand

ANTH 400: Special Problems in Anthropology

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. Jjunior or senior standing or permission of instructor. (Sufficient demand)

Credits	1-4
Degree Attributes	CoB: Social Science
Prerequisites	
SOCI 110 or ANTH 110	
Semester Offered	Sufficient demand

ANTH 450: Independent Study

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.

Credits	1-4
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ANTH 470: Field Work

Supervised on-site field work on an approved topic.

Credits	2-4
Prerequisites	
	ANTH 110

ANTH 495: Global Issues Seminar

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. Prerequisites: [GLBS 101](#); Study Abroad; senior standing.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Social Science
Prerequisites	
	GLBS 101

ART 100: Special Topics in Art

Theory or other elective credit topics are explored Does not count toward BFA studio requirements.

Credits	2-4
Degree Attributes	CLAS: (C) The Arts

ART 101: Foundations 1: Looking to Understand

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement

ART 102: Foundations II: Drawing Permutations

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
	ART 101

ART 103: Color

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. (Spring)

Credits	2
Prerequisites	
	ART 101 , ART 102
Semester Offered	Spring

ART 104: Form & Fabrication

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. (Spring)

Credits	2
Prerequisites	
	ART 101 , ART 102
Semester Offered	Spring

ART 105: Image

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. (Spring)

Credits	2
Prerequisites	
	ART 101 , ART 102
Semester Offered	Spring

ART 106: Time & Space

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. (Spring)

Credits	2
Prerequisites	
	ART 101 , ART 102
Semester Offered	Spring

ART 110: Foundations Discussion

Foundations discussion is a Wednesday class that gathers the entire foundations student cohort to take part in group activities that range from lectures and demonstrations to guest appearances and collaborative projects. (Fall/Spring)

Credits	2
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ART 111: Drawing for Non-Art Majors

Studio work in painting and drawing. A general course for beginners investigating the individual's ideas in various media.

Credits	4
Degree Attributes	CLAS: (C) The Arts

ART 121: Sculpture for Non-Majors

A course focusing on idea development; using both traditional and nontraditional three-dimensional materials.

Credits	4
Degree Attributes	CLAS: (C) The Arts

ART 122: Glass Studio for Non-Majors

A course focusing on idea development using both traditional and non-traditional three-dimensional applications of blown; slumped; and cast glass.

Credits	4
Degree Attributes	CLAS: (C) The Arts

ART 133: Photography for Non-Majors

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts

ART 146: Painting for Non-Majors

This course introduces the materials of acrylic painting for non-majors. Students will gain an understanding of fundamental concepts in painting; including color theory; figure/ground relationships; planes and volumes; and formal and expressive approaches to mark-making within the context of contemporary and historic painting.

Credits	4
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ART 151: Ceramics for Non-Majors

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts

ART 161: Printmaking for Non-Majors

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts

ART 200: Special Topics in Art

Theory or other elective credit topics are explored Does not count toward BFA studio requirements.

Credits	2-4
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ART 201: Introduction to Handbuilding

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 202: Introduction to Modeling and Mold-making

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)

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 102	

ART 203: Introduction to Wheel

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)

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 212: Introduction to Design Studio: Type and Image

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 213: Introduction to Integrative Graphic Design

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 214: Introduction to Speculative Illustration & Design

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 218: Introduction to Photography

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 225: Introduction to Print Media

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)

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	
Semester Offered	Fall and Spring

ART 232: Introduction to Video and Sonic Arts

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 246: Introduction to Painting

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 255: Introduction to Sculpture

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)

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	
Semester Offered	Fall and Spring

ART 262: Introduction to Glass

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 265: Summer Glass I

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. Counts as elective or additional studio credit only. (Summer)

Credits	2-4
Prerequisites	
ART 102	
Semester Offered	Summer

ART 266: Summer Glass II

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. Counts as elective or additional studio credit only. (Summer)

Credits	4
Prerequisites	
ART 102	
Semester Offered	Summer

ART 268: Summer Glass: Cast Light

This is an intensive course covering cast glass; color theory; the therapeutic effects of colored light; and approaches and applications for art and design. Demonstrations include a broad range of techniques including flow casting; sand casting; resin bonded sand molds; cold working; and more. Counts as elective or additional studio credit only. (Summer)

Credits	4
Prerequisites	
ART 102	
Semester Offered	Summer

ART 282: Figure Drawing

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 283: Drawing: Observation to Abstraction

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 284: Drawing: Analyzing Nature

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 285: Digital Drawing

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 289: Robert C. Turner Gallery Internship

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 & Design. The instructor of record provides oversight and evaluation of internship activities. Repeatable for credit up to a total of 6.00 credit hours.

Credits	1-3
Prerequisites	
Sophomore standing	

ART 290: Wood Studio Practicum

This course is an in depth investigation into wood fabrication useful to artists and designers. Open to all School of Art & Design students. May be repeated once for credit.

Credits	2
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ART 291: Technical Metal Fabrication

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.

Credits	2
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ART 293: The Business of Art: Professional Practices

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.

Credits	3
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ART 294: Art Force 5: Social Justice Research Design Outreach

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. (Fall/Spring)

Credits	2
Semester Offered	Fall/Spring

ART 295: Technical Glassblowing

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. (Fall/Spring)

Credits	2
Degree Attributes	BFA: Academic
Semester Offered	Fall and Spring

ART 300: Special Topics in Art-Studio Requirement

Topics and issues not covered in other junior studio courses are explored. Counts toward BFA studio requirement.

Credits	1-4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 301: Ceramic Sculpture I

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. (Fall and Spring)

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 201 , 202 or 203	
Semester Offered	Fall and Spring

ART 302: Ceramic Sculpture II

Continuation of [ART 301](#).

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 201 , 202 or 203	

ART 303: Ceramic Tile

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. (Fall or Spring)

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 201 , 202 or 203	
Semester Offered	Fall or Spring

ART 304: The Figure in Ceramic Sculpture

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 305: Ceramic Pottery I

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 hand building systems.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 203	
Semester Offered	Fall/Spring

ART 306: Ceramic Pottery II

Continuation of Ceramic Pottery I. (Spring)

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 203 , ART 305 recommended	
Semester Offered	Spring

ART 307: Design ! Ceramics

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 309: Ceramic Systems II

A further study of ceramic systems. [ART 307](#) recommended.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 310: Ceramics: Hybrid Vessel II

Continuation of ART 308-Ceramics: Hybrid Vessel I.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 201 , 202 or 203	

ART 312: ExpressiveTypography

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 InDesign 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.

Credits	4
Degree Attributes	SoAD: Studio Requirement AU: Service Learning Courses
Prerequisites	
ART 211	

ART 314: Junior Design Studio: The Graphic Impulse

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. * 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).

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
One of Art213-285-232-225	
Semester Offered	Fall and Spring

ART 316: Design and Marketing

In this course we focus on how the processes; tools and practices of design and marketing work together to support and enhance business goals. Students work with the elements and principles of design to communicate an intended message to an intended target audience. Students also experience the creative and strategic power of the design process. Design and marketing faculty participate in lectures and demonstrations. The semester culminates in an integrated marketing campaign for a not-for-profit entity. This junior studio course is open to Art students and to Marketing majors and minors.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 317: Junior Design Studio I: Graphic Vernacular

Junior Design Studio I builds on foundational skills developed in the intro to Integrative Graphic Design course. This studio adopts a workshop model to refine students' ability to articulate visually using image and typography. With an emphasis on iteravtive practice; students will engage in projects that challenge their technical; conceptual and formal abilities. This course encourages precision in craft and intentionality in design; exploring how visual systems convey meaning. Through structured repetition; critique; and hands-on workshops; students will gain fluency in graphic production while advancing their understanding of form; hierarchy; and context. (Fall).

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
One of Art213-285-232-225	
Semester Offered	Fall

ART 321: View Camera

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 218	

ART 322: Advanced Digital Photography

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 218	

ART 323: Studio Lighting

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](#).

Credits	2
Prerequisites	
ART 218	

ART 324: Contemporary Photographic Practice

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 218	

ART 325: Advanced Print Media

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)

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
One 200-level Exp Media Studio	
Semester Offered	Fall and Spring

ART 327: A Printmakers Approach to Illustration

A Printmakers Approach to Illustration is a contemporary look at the power to communicate across the printed page ; through illustration . Students are encouraged to investigate their own personal visual research along with an emphasis placed on the use of a variety of materials and processes available . We will extend the students' awareness of illustration through continuous presentations of both historic and contemporary forms of visual communication.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 328: Artists Multiples

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)

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
One 200-level Exp Media Studio	
Semester Offered	Spring

ART 329: Digital Print Media

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. [ART 225](#) highly recommended. (Fall)

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
One 200-level Exp Media Studio	
Semester Offered	Fall

ART 331: The Photo Book

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 332: Advanced Video Arts

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. May be repeated once for credit. (Fall and Spring)

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 232	
Semester Offered	Fall and Spring

ART 335: Interactive Media Studio

Explore technological processes that expand and complicate relationships of art and audience. Design responsive environments; 3D stereographics; augmented realities onsite and across networks. Develop generative systems that visualize; sonify; or animate data. Make your own software for live cinema performance.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
One Soph-level Art Studio	

ART 336: Generative and Interactive Animation

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
One of ART 285 / ART 335 / ART 340	

ART 339: Sonic Art

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 340: Design for Web and Mobile Devices

This course introduces students to the building blocks of design for the web and screen-based media. Students explore the application of design principles and the design process for screen-based media with emphasis on content; aesthetics; user experience and craftsmanship. Students learn the basics of computer languages for interactive graphic design. Exercises and projects develop skills in software applications including InDesign; Photoshop; Illustrator and Dreamweaver.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 346: Junior Painting

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. (Fall and Spring)

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 246	
Semester Offered	Fall and Spring

ART 348: Junior - Mixing Materials

From Picasso's cubist collages to Anselm 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. (Spring)

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 246	
Semester Offered	Spring

ART 349: Water-based Media

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 246	

ART 355: Sculpture Foundry: From Miniature to Monumental

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 255	

ART 361: Glass Blowing

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 262	

ART 362: Advanced Glass Blowing

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. (Spring)

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 361	
Semester Offered	Spring

ART 363: Glass and Light

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. (Spring)

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 255 or ART 262	
Corequisites	
ART 369	
Semester Offered	Spring

ART 364: Glass Casting

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)

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 255 or ART 262	
Semester Offered	
Spring	

ART 368: Light and Mixed Media

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 255 , ART 262	
Corequisites	
ART 369	

ART 369: NEON- Bombarder Training

Training students for safe and effective neon processing methods. To be taken concurrently with [ART 363](#); 368; 401 & 500; with neon faculty. Offered each term.

Credits	0
Prerequisites	
ART 255 or 262	
Corequisites	
ART 401	
Semester Offered	
Every Term	

ART 373: Material Poetics in Dimensional Studies

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 255	

ART 374: Advanced Paper/Mixed Media

Advanced Paper/Mixed Media involves intensive exploration into issues of art making with emphasis on the development of each student's unique means of expression. The course concentrates on problem solving; development of ideas; and conceptual possibilities within the contemporary art practice.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
Completion of Art Found Prog	

ART 375: Space and Place

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 255	

ART 376: Casting Glass and Metal Sculpture

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 255 or ART 262	

ART 377: Playful Objects

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.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 255	

ART 378: Art and Ecology

This class explores the intersection of art and ecology through the critical inquiry of student-directed investigations. Topics covered may include ecology; environmental art; sustainability; and community activism responding to local ecological issues through use of creative methodologies.

Credits	4
Degree Attributes	SoAD: Studio Requirement
Prerequisites	
ART 255	

ART 380: Alfred Summer Ceramics

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.)

Credits	1-4
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ART 381: Advanced Drawing

A topical course providing students an intense immersion in both observational and conceptual drawing practices. Topics may include figure drawing; nature drawing; and drawing systems. May be repeated once for credit; preferably with a different instructor. Course content varies from instructor to instructor. (Fall)

Credits	4
Degree Attributes	SoAD: Studio Requirement

ART 382: Ceramic Materials I: Claybodies and Glazes

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)

Credits	4
Corequisites	
ART 382L	
Semester Offered	Fall

ART 382L: Laboratory–Ceramic Matls I

Credits	0
Corequisites	
ART 382	

ART 383: Ceramic Materials II: Problem Solving for Artists

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. (Spring)

Credits	4
Prerequisites	
ART 382	
Corequisites	
ART 383L	
Semester Offered	Spring

ART 383L: Laboratory–Cer Matls II

Credits	0
Corequisites	
ART 383	

ART 384: Studio Lighting

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.

Credits	2
Prerequisites	
ART 218	

ART 385: Internship

Credits	1-4
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ART 387: Tools/Strategies: Digital Design/Fabrication

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.

Credits	4
Corequisites	
ART 387L	

ART 387L: Lab-Tools/Strategies: Digital Design/Fabrication

Credits	0
Corequisites	
ART 387	

ART 388: Methods in Electronic Arts

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)

Credits	2
Semester Offered	Fall or Spring

ART 389: Exhibition Design & Practice

Students gain practical experience in exhibition design and practice; develop marketable skills; engage in analysis of exhibitions and network through visits to regional museums and galleries; and reflect upon exhibition practices in a seminar setting. Students will address relevant contemporary issues in museums and galleries through journaling; assignments; class presentations; and discussion. The seminar readings are not meant to be comprehensive but to reflect the contemporary moment and provide jumping-off points for discussion in this critical moment in museums and galleries' histories and futures.

Credits	2
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ART 390: Methods of Digital Output

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. May be repeated one time for credit up to a total of 4 credit hours.

Credits	2
Prerequisites	ART 387 or ENGR 102
Corequisites	ART 390L

ART 390L: Lab-Methods of Digital Output

Credits	0
Corequisites	ART 390

ART 391: Special Topics-Elective Credit

Special topics that count only as elective credit toward the BFA or as additional studio credits are offered. Topics vary from term to term.

Credits	1-4
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ART 392: Individual Projects with Foundations Faculty

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.

Credits	2-4
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ART 393: Ceramic Art Individual Projects

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.

Credits	2-4
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ART 394: Sculpture and Dimensional Studies Individual Projects

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.

Credits	2-4
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ART 395: Expanded Media Individual Projects

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.

Credits	2-4
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ART 396: Drawing Painting or Photography Individual Projects

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.

Credits	2-4
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ART 397: Glassartengine

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.

Credits	2
Prerequisites	1 Junior-lvl Glass Art Course

ART 399: Glaze Effects and Color

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).

Credits	4
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ART 400: Special Topics in Art

Theory or other elective credit topics are explored. Does not count toward BFA studio requirements.

Credits	1-4
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ART 401: Senior Studio

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.

Credits	4-6
Degree Attributes	SoAD: Studio Requirement

ART 450: Independent Study

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.

Credits	1-4
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ART 484: Introduction to Kiln Procedures and Construction

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.

Credits	4
Corequisites	
	ART 484L

ART 484L: Lab-Kiln Procedures/Const

Credits	0
Corequisites	
	ART 484

ART 499: Senior Show

The culminating exhibit for the BFA degree. Prerequisite: 68-72 studio credit hours earned and senior standing in the BFA program.

Credits	0
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ARTH 120: Topics in Art History: Non-western

Selected topics in non-western art history are covered. Topics vary from term to term.

Credits	2
Degree Attributes	CLAS: (C) The Arts SoAD: ARTH non-Western
Corequisites	
	ARTH 100D

ARTH 126: Buddhist Arts of Asia

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts SoAD: ARTH non-Western
Corequisites	
	ARTH 100D

ARTH 127: Arts of Ancient India

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts SoAD: ARTH non-Western
Corequisites	
	ARTH 100D

ARTH 128: Introduction to Material Culture

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts SoAD: ARTH non-Western
Corequisites	
	ARTH 100D

ARTH 130: Topics in Art History: Ancient to Baroque

Selected topics art history from ancient to baroque are covered. Topics vary from term to term.

Credits	2
Degree Attributes	CLAS: (C) The Arts SoAD: ARTH Ancient-Baroque
Corequisites	
ARTH 100D	

ARTH 133: Renaissance and Baroque Art and Architecture: From the Classical Ideal to Theatrical Expression

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts SoAD: ARTH Ancient-Baroque
Corequisites	
ARTH 100D	

ARTH 136: Medieval Visual Culture

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts SoAD: ARTH Ancient-Baroque
Corequisites	
ARTH 100D	

ARTH 137: Ancient Art: History Legend and Legacy

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts SoAD: ARTH Ancient-Baroque
Corequisites	
ARTH 100D	

ARTH 140: Topics in Art History: Modern

Selected topics in modern art history are covered. Topics vary from term to term.

Credits	2
Degree Attributes	CLAS: (C) The Arts SoAD: ARTH Modern
Corequisites	
ARTH 100D	

ARTH 141: 20th Century Art

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts SoAD: ARTH Modern
Corequisites	
ARTH 100D	

ARTH 143: Art and Social Ideals

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts SoAD: ARTH Modern
Corequisites	
ARTH 100D	

ARTH 144: The Ideal Body

Credits	2
Degree Attributes	CLAS: (C) The Arts Creative Disc (not used) SoAD: ARTH Modern
Corequisites	
ARTH 100D	

ARTH 146: Modern Sculpture

This course provides a critical introduction to modern sculpture in the twentieth century. It traces the contexts of modern sculpture; sculptors; their audiences; and materials; and explores key themes from the period. It examines sculpture made from a variety of materials—stone; marble; bronze; steel; fibers; ceramic; wood; glass; plastic—among others.

Credits	2
Degree Attributes	CLAS: (C) The Arts Creative Disc (not used) SoAD: ARTH Modern
Corequisites	
ARTH 100D	

ARTH 149: Photography and the Moving Image

A survey of photography and moving image art from Daguerrotypes to Moholy-Nagy's innovative Bauhaus practice to contemporary video installation.

Credits	2
Degree Attributes	CLAS: (C) The Arts SoAD: ARTH Modern

ARTH 200: Topics in Art History

Topics vary from semester to semester. May be repeated for credit.

Credits	1-4
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ARTH 210: Global Perspectives: Paris

This course enables students to develop an understanding and appreciation of another culture; first in the classroom; and then two weeks in Paris. The focus is on history; art; and contemporary culture. Open to all students. Applicable as elective credit only toward the BFA and the B.S. in Art History and Theory; does not apply to art history requirements.

Credits	2
Degree Attributes	AU: Global Perspective CoB: Humanities AU: Travel Courses
Crosslisted	
FREN 210 , GLBS 210	

ARTH 211: Art in Our Time

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. (Fall & Spring)

Credits	4
Corequisites	
ARTH 211D	

ARTH 211D: Discussion

Credits	0
Corequisites	
ARTH 211	

ARTH 300: Topics in Art History

Topics vary from semester to semester. May be repeated for credit.

Credits	1-4
Degree Attributes	CoB: Humanities
Prerequisites	
ARTH 211	

ARTH 304: Global Arts: Contemporary Asia

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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Humanities
Prerequisites	
ARTH 211	

ARTH 305: South Asian Arts 15-20c: Mughals to Modern

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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Humanities
Prerequisites	
ARTH 211	

ARTH 306: Arts of Japan

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.

Credits	4
Prerequisites	
ARTH 211	

ARTH 307: East Asian Design and Material Culture

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. (Fall; odd years)

Credits	4
Prerequisites	
ARTH 211	

ARTH 308: Ceramics in Japan & Beyond

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)

Credits	4
Prerequisites	
ARTH 211	
Semester Offered	Spring

ARTH 312: Nature & the Museum

This course explores how nature has become a key component of the museological gaze. In an institutional context; we will examine the emergence of natural history museums; from early; private; curio cabinets to the full-fledged science centers of today. (Spring)

Credits	4
Prerequisites	
ARTH 211	
Semester Offered	Spring

ARTH 321: Greek and Roman Art and Architecture

This course introduces the architecture; painting; sculpture; pottery and other forms of material culture from Ancient Greece and Rome to further our understanding of the foundations of western civilization and western approaches to art; beauty and civic planning.

Credits	4
Degree Attributes	CoB: Humanities
Prerequisites	
ARTH 211	

ARTH 322: Medieval Art and Architecture

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.

Credits	4
Degree Attributes	CoB: Humanities
Prerequisites	
ARTH 211	

ARTH 324: Medieval Illuminated Manuscripts

This course surveys the role and development of illuminated manuscripts—hand-written; painted books—in Western Europe beginning with the seventh century and ending in the fifteenth century with the invention of the printing press.

Credits	4
Prerequisites	
ARTH 211	

ARTH 326: Medieval Materiality

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. *(Annually).

Credits	4
Degree Attributes	CoB: Humanities
Prerequisites	
ARTH 211	
Semester Offered	Annually

ARTH 330: From Revolt to Revolution - 18th Century Art in Europe

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.

Credits	4
Prerequisites	
ARTH 211	

ARTH 331: Italian Renaissance Art and Architecture

This course is an in-depth study of the major stylistic forms; directions and iconography in Italian Renaissance art and architecture (14th through 16th centuries). We explore the systems of art-making and patronage in the major urban and court centers.

Credits	4
Degree Attributes	CoB: Humanities

ARTH 332: Northern Renaissance Art

This course is an examination of Northern Renaissance art (France; Germany; the Netherlands and England) from the 1400s until about 1600. The period is marked by an increase in the materialism of religious faith; most notably observed in the extravagant artistic patronage by the royal courts and the Church.

Credits	4
Degree Attributes	CoB: Humanities

ARTH 333: Baroque Art and Architecture

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.

Credits	4
Degree Attributes	CoB: Humanities
Prerequisites	
	ARTH 211

ARTH 342: Primitivism: A Western Perspective

This course will investigate the issue of primitivism; one of the major topics in modernism. We examine the problematic nature of primitivism; specifically artists' involvement in the broader discourse of colonialism. The class will critique a variety of art practices--including photographic mapping; black deco spectacle; ethnographic Surrealism--ranging from the mid 19th century to the present.

Credits	4
Degree Attributes	CoB: Humanities
Prerequisites	
	ARTH 211

ARTH 343: Modern Art

Encompassing the movements of Symbolism to Surrealism; this course covers the developments in modern art during the first half of the 20th Century. Students explore such themes as modernity; primitivism; and utopian theory as well as the stylistic developments and formal innovations of this period.

Credits	4
Degree Attributes	CoB: Humanities

ARTH 344: In the Studio: Modern and Contemporary Painting

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.

Credits	4
Prerequisites	
	ARTH 211

ARTH 346: History of Modern Design

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.

Credits	4
Prerequisites	
	ARTH 211

ARTH 347: 1989 and After

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.

Credits	4
Degree Attributes	AU: Global Perspective
Prerequisites	
	ARTH 211

ARTH 351: In of and around Contemporary Craft

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.

Credits	4
Degree Attributes	CoB: Humanities
Prerequisites	
	One 100-level ARTH course

ARTH 352: Contemporary Projects in Art

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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Humanities
Prerequisites	
	ARTH 211

ARTH 353: Global Hangover

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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Humanities
Prerequisites	
	ARTH 211

ARTH 354: Recent Sculptural Practices

A series of recent projects exploring contemporary issues in sculpture will be the focus of this class. We will be looking at 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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Humanities
Prerequisites	
ARTH 211	

ARTH 355: Picasso in Context

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.

Credits	4
Prerequisites	
ARTH 211	

ARTH 356: Modern Ceramics in Europe and North America

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).

Credits	4
Prerequisites	
ARTH 211	

ARTH 367: Landscape Across Cultures

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. (Annually)

Credits	4
Degree Attributes	CoB: Humanities
Prerequisites	
ARTH 211	
Semester Offered	Annually

ARTH 373: Materiality in Experimental Film and Video Art

This course traces the material nature of experimental film and video art; including handmade cinema; avant-garde film; computer art; algorithmic media; etc.

Credits	4
Prerequisites	
ARTH 211	

ARTH 382: Gender and Art History: Feminist Art in a Global Frame

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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Humanities
Prerequisites	
ARTH 211	
Crosslisted	
SJST 382 , WGST 382	

ARTH 391: Looting Europe: How Hitler Stole the Continent's Art

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. (Allen/Winter)

Credits	4
Degree Attributes	AU: Global Perspective SoAD: Humanities

ARTH 400: Topics in Art History

Topics vary from semester to semester. May be repeated for credit. Prerequisite: One 300-level art history course.

Credits	4
Prerequisites	One 300-level ARTH course

ARTH 415: The Persistence of Painting

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. (Fall)

Credits	4
Semester Offered	Fall

ARTH 420: Islamic Art in the Mediterranean World

This course traces the history of the art; architecture and culture of the Islamic world bordering the Mediterranean basin. Religious and secular works of art are examined in order to foster greater understanding and appreciation of Islamic visual culture and aesthetics.

Credits	4
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ARTH 439: History of Ceramic Art Craft and Design: Global Flows

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.

Credits	4
Prerequisites	One 300-level ARTH course

ARTH 445: Understanding Culture through the Lens of World Cinema

Through the lenses of various themes—youth; sexuality; class; religion; politics; revolution; time; and space—this course explores how different cultures throughout the world understand and communicate their cultural values through cinema.

Credits	4
Degree Attributes	AU: Global Perspective

ARTH 450: Independent Study

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.

Credits	1-4
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ARTH 460: Exploring Art History: Concepts Methods and Practices

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.

Credits	4
Prerequisites	
One 300-400 level ARTH	

ARTH 461: Viewing Sculpture: Figurative Modernist Minimalist Performative

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.

Credits	4
Prerequisites	
One 300-level ARTH course	

ARTH 462: Making Writing

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.

Credits	4
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ARTH 466: Histories of Photography in the Non-Western World

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.

Credits	4
Degree Attributes	AU: Global Perspective
Crosslisted	
GLBS 466	

ARTH 493: Art in the Age of Digital Recursion

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.

Credits	4
Prerequisites	
One 300-level ARTH course	

ARTH 499: B.S. Thesis in Art History and Theory

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.

Credits	2
Prerequisites	
5 upr-lvl ARTH courses & perm	

ASTR 103: Introductory Astronomy

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.

Credits	4
Degree Attributes	CLAS: (F-II) Scientfcl Knowldg CLAS: (F2) Nat Sci-no Lab CoB: Natural Science

ASTR 104: Observational Astronomy

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.

Credits	4
Degree Attributes	CLAS: (F-I) Scientific Inquiry

ASTR 105: Solar Systems

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.

Credits	2
Degree Attributes	CLAS: (F-II) Scientific Knowldg CoB: Natural Science

ASTR 106: Stars Galaxies and Cosmology

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.

Credits	2
Degree Attributes	CLAS: (F-II) Scientific Knowldg

ASTR 107: Elementary Astronomy Lab

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.

Credits	2
Degree Attributes	CLAS: (F-I) Scientific Inquiry CLAS: (FI) Nat Sci w/Lab CoB: Natural Science

ASTR 200: Special Topics in Astronomy

Topics vary from year to year. (Sufficient demand)

Credits	1-4
Semester Offered	Sufficient demand

ASTR 302: Planetary Science

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. (Sufficient demand)

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
PHYS 111 or 125	
Semester Offered	Sufficient demand

ASTR 303: Stellar Astronomy

Emphasis on the observational and theoretical basis for understanding stellar structure and evolution; beginning with the Sun. . (Sufficient demand)

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
MATH 151, 1 Year of College Physics	
Semester Offered	Sufficient demand

ASTR 304: Galactic Astronomy and Cosmology

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. (Sufficient demand)

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
	MATH 151 , 1 Year of College Physics
Semester Offered	Sufficient demand

ASTR 307: Advanced Astronomy Laboratory

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. (Sufficient demand)

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
	MATH 151 , pre- or co-requisite, PHYS 111 or 125
Semester Offered	Sufficient demand

ASTR 400: Topics: Astronomy

Credits	1-4
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ASTR 450: Independent Study

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.

Credits	1-4
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ATHT 103: Prevention and Care of Athletic Injuries

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.

Credits	4
Corequisites	
	ATHT 103L

ATHT 103L: Lab-Prevent/Care Ath Injuries

Credits	0
Corequisites	
	ATHT 103

ATHT 104: Introduction to Clinical Experiences in AT

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.

Credits	1
Prerequisites	
	ATHT 103 , ATHT 111

ATHT 105: Perspectives in the Health Professions

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.

Credits	3
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ATHT 110: Medical Sciences

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.

Credits	2
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ATHT 111: Emergency Medicine in Athletic Training

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.

Credits	3
Degree Attributes	AU: Wellness (Fall '19)
Corequisites	
ATHT 111L	

ATHT 111L: Laboratory-Emergency Medicine

Credits	0
Corequisites	
ATHT 111	

ATHT 119: Training in First Aid/CPR-AED

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.

Credits	1
Degree Attributes	AU: Wellness (Fall '19)

ATHT 190: Basics of Strength Training and Conditioning

This course introduces the basics of strength training and conditioning; focusing on performance testing; exercise selection and technique; program design; and adaptations to training. Students will learn safe and effective methods for developing strength; power; and endurance; with practical applications for various populations. Emphasis is placed on proper form; equipment use; and progressive training strategies.

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Wellness (Fall '19)

ATHT 200: Special Topics

Topics of interest in Athletic Training are explored. Topics vary from term to term.

Credits	1-4
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ATHT 201: Clinical Experience in Athletic Training I

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. A lab fee may be assessed.

Credits	1
Prerequisites	ATHT 103 , ATHT 111

ATHT 202: Clinical Experience in Athletic Training II

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. A lab fee may be assessed.

Credits	1
Prerequisites	ATHT 103 and ATHT 210 , ATHT 103

ATHT 205: Structural Kinesiology

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.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
BIOL 103 or BIOL 107	

ATHT 205L: Lab-Structural Kinesiology

Credits	0
Corequisites	
ATHT 205	

ATHT 210: Advanced Athletic Training

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.

Credits	3
Prerequisites	
ATHT 103	

ATHT 215: Personal Health and Wellness

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.

Credits	2
Degree Attributes	AU: Wellness (Fall '19)

ATHT 222: Nutrition for Human Performance and Exercise

This course focuses on human nutrition and metabolism; with particular emphasis on the implications of nutrition on human performance and physical activity.

Credits	2
Degree Attributes	CLAS: (F-II) Scientific Knowldg CLAS: (F2) Nat Sci-no Lab CoB: Natural Science AU: Wellness (Fall '19)

ATHT 232: Introduction to Sports Management

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.

Credits	3
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ATHT 242: Sports Society and Ethics

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.

Credits	3
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ATHT 265: Integrative Therapeutic Applications I

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.

Credits	3
Prerequisites	
ATHT 210	
Corequisites	
ATHT 265L	

ATHT 265L: Lab-Integ Therapeutic Apps I

Credits	0
Corequisites	
ATHT 265	

ATHT 276: Integrative Therapeutic Applications II

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.

Credits	3
Prerequisites	
ATHT 265 (formerly ATHT 365)	
Corequisites	
ATHT 276L	

ATHT 276L: Lab-Integ Therapeutic Apps II

Credits	0
Corequisites	
ATHT 276	

ATHT 300: Topics in Athletic Training

Topics of interest in Athletic Training are explored. Topics vary from term to term.

Credits	1-4
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ATHT 301: Clinical Experience in Athletic Training III

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.

Credits	2
Prerequisites	
ATHT 202	

ATHT 302: Clinical Experience in Athletic Training IV

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.

Credits	2
Prerequisites	
ATHT 301	
Corequisites	
ATHT 348	

ATHT 310: Orthopedic Procedures

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.

Credits	2
Prerequisites	
ATHT 103	

ATHT 320: Psychosocial Strategies in Athletic Training

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.

Credits	2
Prerequisites	
PSYC 101	

ATHT 334: Physical Evaluation of the Lower Extremity

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.

Credits	3
Corequisites	
ATHT 334L	

ATHT 334L: Lab-Eval of Lower Extremity

Credits	0
Corequisites	
ATHT 334	

ATHT 341: Evaluation of the Head Neck and Spine

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.

Credits	2
Prerequisites	
BIOL 307	

ATHT 348: Physical Evaluation of the Upper Extremity

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.

Credits	3
Prerequisites	
ATHT 334	
Corequisites	
ATHT 348L	

ATHT 348L: Lab-Eval of Upper Extremity

Credits	0
Corequisites	
ATHT 348	

ATHT 390: Junior Seminar

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.

Credits	1
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ATHT 392: Biomechanics

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.

Credits	3
Degree Attributes	CoB: Natural Science

ATHT 393: Physiology of Exercise

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.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	BIOL 208/308

ATHT 401: Clinical Experience in Athletic Training V

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.

Credits	2
Prerequisites	ATHT 302

ATHT 402: Clinical Experience in Athletic Training VI

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. Prerequisites:

Credits	2
Prerequisites	ATHT 401
Corequisites	ATHT 495

ATHT 403: Medical Aspects of Athletic Training

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.

Credits	1
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ATHT 420: Pharmacology in Athletic Training

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.

Credits	2
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ATHT 432: Organization and Administration of Athletics

An in-depth study of administrative techniques including budgeting; personnel; and the use of computers in the athletic setting.

Credits	2
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ATHT 450: Independent Study

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.

Credits	1-4
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ATHT 459: Research Methods in Athletic Training I

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.

Credits	2
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ATHT 469: Research Methods in Athletic Training II

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.

Credits	1
Prerequisites	ATHT 459

ATHT 485: Clinical Internship in Athletic Training

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](#).

Credits	4
Prerequisites	ATHT 495 , taken concurrently

ATHT 490: Senior Seminar in Athletic Training

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.

Credits	1
Prerequisites	ATHT 301 , ATHT 302

ATHT 495: Current Topics in Athletic Training

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.

Credits	2
Prerequisites	
	ATHT 432

BCHM 300: Topics in Biochemistry

Credits	1-4
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BCHM 320: Toxicology

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.

Credits	4
Prerequisites	
	BIOL 211

BCHM 324: Phage Genomics

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. (Spring)

Credits	2
Prerequisites	
	BIOL 150 or 155
Semester Offered	Spring

BCHM 390: Junior Seminar

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.

Credits	1
Prerequisites	
	BIOL 211

BCHM 400: Research Topics

Credits	4
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BCHM 400L: Research Topics-Laboratory

Credits	0
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BCHM 420: Biochem: Proteins & Metabolism

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.

Credits	4
Prerequisites	
	BIOL 211 , CHEM 310 or 315
Corequisites	
	BCHM 420L
Crosslisted	
	CEMS 564

BCHM 420L: Laboratory-Biochem:Prt/Metab

Credits	0
Crosslisted	
	CEMS 564L

BCHM 422: BioChem: Nucleic Acids

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

Credits	4
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BCHM 422L: Laboratory-Biochem: Nucl Acids

Credits	0
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BCHM 450: Independent Study

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 Biochemistry.

Credits	1-4
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BCHM 490: Senior Seminar

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.

Credits	1
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BIOL 100: Special Topics

Credits	1-4
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BIOL 101: General Biology I

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.

Credits	4
Degree Attributes	CLAS: (F-I) Scientific Inquiry CLAS: (FI) Nat Sci w/Lab CoB: Natural Science

BIOL 102: General Biology II

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.

Credits	4
Degree Attributes	CLAS: (F-I) Scientific Inquiry CLAS: (FI) Nat Sci w/Lab CoB: Natural Science

BIOL 105: Science of Nutrition

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.

Credits	4
Degree Attributes	CLAS: (F2) Nat Sci-no Lab CoB: Natural Science AU: Wellness (Fall '19)

BIOL 106: Field Botany

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.

Credits	4
Degree Attributes	CLAS: (F-I) Scientific Inquiry CLAS: (F1) Nat Sci w/Lab CoB: Natural Science

BIOL 107: Human Anatomy and Physiology I

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.

Credits	4
Degree Attributes	CLAS: (F-I) Scientific Inquiry CLAS: (F1) Nat Sci w/Lab CoB: Natural Science
Corequisites	BIOL 107L

BIOL 115: Introduction to Human Biology

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.

Credits	4
Degree Attributes	CLAS: (F-II) Scientifc Knowldg

BIOL 119: Physiology of Aging

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)

Credits	4
Degree Attributes	CLAS: (F-II) Scientifc Knowldg CLAS: (F2) Nat Sci-no Lab CoB: Natural Science AU: Service Learning Courses
Semester Offered	Alternate Years

BIOL 120: Gut Instinct: An Introduction to Microbes

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. (Summer/Allen)

Credits	4
Degree Attributes	CLAS: (F-III) Science/Society CoB: Natural Science AU: Wellness (Fall '19)
Corequisites	BIOL 120L
Semester Offered	Summer/Allen

BIOL 130: Introduction to Human Genetics

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.

Credits	4
Degree Attributes	CLAS: (F-III) Science/Society CoB: Natural Science
Corequisites	
BIOL 130L	

BIOL 130L: Laboratory-Intro Hum Genetics

Credits	0
Corequisites	
BIOL 130	

BIOL 131: The Basics of Cancer Biology

This course is designed for a broad spectrum of students from different academic backgrounds and interests; who would like to learn more about cancer; its biology; mechanisms of action; therapeutics; ethical aspects of chemotherapeutics treatments and alternative approaches to malignances. Students learn how to communicate scientific basics of cancer etiology to society and their community members in an approachable language.

Credits	4
Degree Attributes	CLAS: (F-II) Scientific Knowldg CLAS: (F2) Nat Sci-no Lab CoB: Natural Science

BIOL 150: Biological Foundations

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.

Credits	4
Degree Attributes	CLAS: (F-I) Scientific Inquiry CLAS: (F2) Nat Sci-no Lab CoB: Natural Science

BIOL 150L: Biological Foundations Lab

This laboratory course will focus on an authentic research question related to biology and biochemistry. Students will collect and analyze data to explore various biological topics.(Fall)

Credits	1
Degree Attributes	CLAS: (F1) Nat Sci w/Lab
Corequisites	
BIOL 150	
Semester Offered	Fall

BIOL 155: Biological Foundations: Research Project

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.

Credits	4
Degree Attributes	CLAS: (F-I) Scientific Inquiry CLAS: (F1) Nat Sci w/Lab CoB: Natural Science
Corequisites	
BIOL 155L	

BIOL 155L: Lab-Biological Foundations: Research Project

Credits	0
Corequisites	
	BIOL 155

BIOL 207: Introduction to Anatomy and Physiology I

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.

Credits	4
Degree Attributes	CLAS: (F-II) Scientific Knowldg CLAS: (F2) Nat Sci-no Lab CoB: Natural Science
Corequisites	
	BIOL 207L

BIOL 207L: Laboratory-Intro A&P I

Credits	0
Corequisites	
	BIOL 207

BIOL 208: Introduction to Anatomy and Physiology II

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.

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	
	BIOL 207
Corequisites	
	BIOL 208L

BIOL 208L: Laboratory-Intro A&P II

Credits	0
Corequisites	
	BIOL 208

BIOL 211: Cell Biology

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.

Credits	4
Prerequisites	
	C or better in BIOL 150
Corequisites	
	BIOL 211L

BIOL 211L: Laboratory-Cell Biology

Credits	0
Corequisites	
	BIOL 211

BIOL 212: Principles of Genetics

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.

Credits	4
Prerequisites	
	C or better in BIOL 211 , CHEM 106
Corequisites	
	BIOL 212L

BIOL 212L: Laboratory-Genetics

Credits	0
Corequisites	
BIOL 212	

BIOL 213: Structure and Function of Organisms

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.

Credits	4
Prerequisites	
C or better in BIOL 211	
Corequisites	
BIOL 213L	

BIOL 213L: Lab-Structr/Function Organisms

Credits	0
Corequisites	
BIOL 213	

BIOL 226: Biostatistics

Application of statistics to experimental design; data analysis; and decision making in the biological sciences.

Credits	4
Degree Attributes	CLAS: (03) Quant Reasoning CoB: Quant Reasoning
Prerequisites	
BIOL 211 Pre- or Co-Requisite	

BIOL 300: Topics in Biology

This course provides opportunities for examining areas not covered in the regular offerings. Topics vary each semester.

Credits	1-4
Corequisites	
BIOL 300L	

BIOL 302: General Microbiology

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.

Credits	4
Prerequisites	
BIOL 211 and [CHEM 310 or 315].	
Corequisites	
BIOL 302L	

BIOL 302L: Laboratory-Genr'l Microbiology

Credits	0
Corequisites	
BIOL 302	

BIOL 306: Human Pathophysiology

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.

Credits	4
Prerequisites	
BIOL 211	

BIOL 307: Anatomy and Physiology: Nerves Muscles Skeleton

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. (Fall)

Credits	4
Prerequisites	
BIOL 211 or BIOL150/BIOL155 and CHEM105 or BIOL150/BIOL155 and BIOL119	
Corequisites	
BIOL 307L	
Semester Offered	Fall

BIOL 307L: Laboratory-A&P: NMS

Credits	0
Corequisites	
BIOL 307	

BIOL 308: Anatomy and Physiology: Viscera

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.

Credits	4
Prerequisites	
BIOL 307	
Corequisites	
BIOL 308L	

BIOL 308L: Laboratory-A&P: Viscera

Credits	0
Corequisites	
BIOL 308	

BIOL 314: Community and Systems Biology

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.

Credits	4
Prerequisites	
C or better in BIOL 212 & 213, BIOL 226	
Corequisites	
BIOL 314L	

BIOL 314L: Lab-Community & Systems Bio

Credits	0
Corequisites	
BIOL 314	

BIOL 315: Genetics and Evolution of Populations

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. [BIOL 213](#) recommended.

Credits	4
Prerequisites	
BIOL 212	

BIOL 320: Toxicology

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.

Credits	4
Prerequisites	
BIOL 211	

BIOL 322: Botany

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.

Credits	4
Prerequisites	
BIOL 150 or 211 or ENVS 101	
Corequisites	
BIOL 322L	

BIOL 322L: Laboratory-Botany

Credits	0
Corequisites	
BIOL 322	

BIOL 324: Phage Genomics

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.

Credits	2
Prerequisites	
BIOL 150 or 155	

BIOL 346: Animal Nutrition

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.

Credits	4
Prerequisites	
BIOL 211	

BIOL 348: Animal Behavior

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.

Credits	4
Prerequisites	
BIOL 211	

BIOL 353: Tropical Biology

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. (Allen; even years)

Credits	4
Degree Attributes	AU: Global Perspective
Prerequisites	
BIOL 150 or ENVS 101	
Semester Offered	Allen; even years

BIOL 354: Ecology

Interactions of organisms and their environment with emphasis on populations; communities; and ecosystems. Three lectures and one three-hour laboratory. (Fall; alternate years)

Credits	4
Prerequisites	
BIOL 150 or ENVS 101	
Corequisites	
BIOL 354L	
Semester Offered	Fall; alternate years

BIOL 354L: Laboratory-Ecology

Credits	0
Corequisites	
BIOL 354	

BIOL 355: Field Techniques in Plant Biology

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).

Credits	4
Prerequisites	
BIOL 150 or ENVS 101	
Semester Offered	Summer

BIOL 357: Conservation Biology

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.

Credits	4
Prerequisites	
BIOL 150 or ENVS 101	

BIOL 358: Biogeography

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.

Credits	4
Prerequisites	
BIOL 226 , BIOL 213 or 354	

BIOL 375: Comparative Vertebrate Anatomy

A comprehensive review of the structure; taxonomy; evolution; and biological relationships of vertebrates. Two lectures and two two-hour laboratories. (Alternate years)

Credits	4
Prerequisites	
BIOL 211	
Corequisites	
BIOL 375L	
Semester Offered	Alternate Years

BIOL 375L: Laboratory-Comparativ Vert Anat

Credits	0
Corequisites	
BIOL 375	

BIOL 376: Animal Physiology

Principles and problems concerned with the physiochemical responses and functioning of animal tissues and organs. Three lectures and one three-hour laboratory period.

Credits	4
Prerequisites	
BIOL 375	
Corequisites	
BIOL 376L	

BIOL 376L: Laboratory-Animal Physiology

Credits	0
Corequisites	
BIOL 376	

BIOL 390: Junior Seminar

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.

Credits	1
Prerequisites	
BIOL 211 Pre- or Co-Requisite	

BIOL 400: Research Topics

Offerings are research-intensive courses that vary from year to year.

Credits	4-5
Corequisites	
BIOL 400L	

BIOL 400L: Research Topics-Laboratory

Credits	0
Corequisites	
BIOL 400	

BIOL 402: Immunology

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.

Credits	4
Prerequisites	BIOL 211 or BIOL 362

BIOL 405: Bioinformatics

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. (Fall; even years)

Credits	4
Prerequisites	BIOL 211
Semester Offered	Fall; even years

BIOL 420: Biochemistry: Proteins and Metabolism

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.

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	BIOL 211 , CHEM 310 or 315
Corequisites	BIOL 420L
Crosslisted	CEMS 564

BIOL 420L: Laboratory-Biochem: Prot/Metab

Credits	0
Corequisites	BIOL 420
Crosslisted	CEMS 564L

BIOL 422: Biochemistry: Nucleic Acids

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.

Credits	4
Prerequisites	See Catalog Course Description
Corequisites	BIOL 422L

BIOL 422L: Laboratory-Biochem: Nucl Acids

Credits	0
Corequisites	
BIOL 422	

BIOL 425: Physiological Plant Ecology

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. (Alternate years)

Credits	4
Prerequisites	
BIOL 213 , BIOL 226 , CHEM 310 or 315	
Corequisites	
BIOL 425L	
Semester Offered	Alternate Years

BIOL 425L: Laboratory-Physiol Plant Ecol

Credits	0
Corequisites	
BIOL 425	

BIOL 450: Independent Study

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.

Credits	1-4
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BIOL 485: Internship in Biology

Off-campus research in consultation with faculty and project advisors. Open to junior; senior and graduate biology students. The course will be assessed as pass/fail.

Credits	1-4
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BIOL 490: Senior Seminar

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. (Spring)

Credits	1
Semester Offered	Spring

BIPY 450: Independent Study

Credits	1
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BIPY 485: Practicum or Internship

Credits	1-4
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BIPY 499: Thesis

Credits	1-4
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BUSI 100: Topics in Business

Credits	1-3
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BUSI 105: Business Perspectives

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.

Credits	1
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BUSI 106: Contemporary Business

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.

Credits	3
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BUSI 113: Descriptive Analytics & Statistics

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.

Credits	3
Degree Attributes	CLAS: (03) Quant Reasoning CoB: Quant Reasoning

BUSI 150: Business Analytics Math

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.

Credits	3
Degree Attributes	CoB: Quant Reasoning

BUSI 213: Research Methods

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.

Credits	3
Degree Attributes	CoB: Quant Reasoning
Prerequisites	BUSI 113

BUSI 261: Operations Research

Scientific approach to the analysis and solution of economic and business problems to provide a quantitative basis for model building and decision making. Mathematics is applied to business decision making through techniques such as linear programming; queuing theory; network models; Markov analysis; etc. Prerequisites: MATH 107 and [BUSI 113](#); [ECON 201](#) either previously or concurrently.

Credits	3
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BUSI 300: Topics in Business

Topics not covered in other Business courses are presented.

Credits	1-4
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BUSI 301: Family Business Management

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.

Credits	3
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BUSI 302: Entrepreneurship in Practice

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.

Credits	2
Degree Attributes	CoB: Field Experience

BUSI 305: German Auto Industry

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. Sophomore standing or permission of instructor.

Credits	4
Degree Attributes	AU: Global Perspective AU: Travel Courses
Crosslisted	MBA 605

BUSI 319: Business Ethics

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.

Credits	3
Degree Attributes	CoB: Humanities

BUSI 322: Business Intelligence

This course concentrates on the foundations of computerized support for managerial decision making. It focuses on decision making theory; identifying a company's information requirements; data warehouse design; modelling techniques for decision making; and introduces a broad range of business analytics tools.

Credits	3
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BUSI 439: Entrepreneurship in the 21st Century

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.

Credits	3
Degree Attributes	CoB: Field Experience

BUSI 450: Independent Study

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.

Credits	1-4
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BUSI 457: International Business

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.

Credits	3
Degree Attributes	AU: Global Perspective

BUSI 460: Seminar in Business

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.

Credits	3
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BUSI 485: Internship

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.

Credits	1-4
Degree Attributes	CoB: Field Experience

BUSI 499: Business Policy

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. Senior standing.

Credits	3
Prerequisites	
MGMT 328 , FIN 348 , MKTG 221 ; Sr	

CEMS 200: Special Topics

Credits	2-4
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CEMS 203: Introduction to Ceramic Powder Processing

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).

Credits	3
Prerequisites	
CHEM 106	
Corequisites	
CEMS 203L	

CEMS 203L: Laboratory-Intro Cer Powd Proc

Credits	0
Corequisites	
CEMS 203	

CEMS 204: Thermodynamics of Materials

Credits	4
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CEMS 214: Structure and Properties of Materials

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.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
CHEM 106 , MATH 152	

CEMS 215: Microscopy and Microstructural Characterization

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.

Credits	3
Prerequisites	
Prerequisites: CEMS 214 and PHYS 126	
Corequisites	
CEMS 215L	

CEMS 215L: Laboratory-Microstruct Charact

Credits	0
Corequisites	
CEMS 215	

CEMS 216: Bonding and Structure of Materials

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.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
CHEM 106 , CEMS 214	

CEMS 235: Thermodynamics of Materials

This course introduces the fundamental concepts of thermodynamics; equilibrium; and thermochemistry relevant to materials systems.

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	
CEMS 214 , CHEM 106 , MATH 253	

CEMS 237: Thermal Processes in Materials

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.

Credits	4
Prerequisites	
CEMS 235 or CHEM 343	

CEMS 251: Mechanics of Materials

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.

Credits	3
Prerequisites	
PHYS 125 , ENGR 102	

CEMS 300: Special Topics

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.

Credits	1-4
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CEMS 303: Powder Characterization

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. (Fall in A-Block)

Credits	1
Semester Offered	Fall- A block

CEMS 305: Computational Materials

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.

Credits	2
Prerequisites	
ENGR 104	

CEMS 313: Thermal Analysis

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. (Fall in B-Block)

Credits	1
Semester Offered	Fall-B block

CEMS 314: Ceramic Processing Principles

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.

Credits	3
Prerequisites	
	CHEM 106

CEMS 316: Chemical Processing in Ceramics

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.

Credits	3
Prerequisites	
	CHEM 106

CEMS 317: Sintering

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.

Credits	3
Prerequisites	
	CEMS 237 , CEMS 314

CEMS 318: Refractories

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.

Credits	3
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CEMS 322: Introduction to Glass Science

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.

Credits	3
Prerequisites	
	CEMS 235

CEMS 325: Glass Laboratory

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.

Credits	2
Prerequisites	
	CEMS 322 pre- or co-requisite
Corequisites	
	CEMS 325L

CEMS 325L: Laboratory-Glass Lab

Credits	0
Corequisites	
CEMS 325	

CEMS 326: Natural Glasses

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.

Credits	3
Corequisites	
CEMS 326L	

CEMS 326L: Natural Glasses Lab

Students will gain understanding in methods such as SEM; XRD; XRF; spectroscopes (Raman; IR; optical); and characterization by DSC; viscosity; mechanical strength;...Students will characterize natural glasses for their composition; structure; and properties. The aim of this class is teaching students to learn how to work independently on a research project; setting up an experimental study design; conducting experiments; evaluating data and presenting the data to share with audience in and outside the field of research.

Credits	0
Corequisites	
CEMS 326	

CEMS 328: Industrial Glass and Coatings on Glass

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.

Credits	3
Prerequisites	
CEMS 322	

CEMS 334: Introduction to Polymers

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.

Credits	3
Prerequisites	
CEMS 235 or CHEM 343	

CEMS 336: Physical Metallurgy I

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.

Credits	3
Prerequisites	
See Catalog Course Description	

CEMS 342: Thermal and Mechanical Properties

This course is an 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.

Credits	4
Prerequisites	
CEMS 214 , CEMS 235 , CEMS 237	

CEMS 344: Properties II: Electrical Magnetic and Optical

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. Prerequisites: [PHYS 126](#); [MATH 271](#); [CEMS 237](#).

Credits	4
Prerequisites	
CEMS 237 , MATH 271 , PHYS 126	
Corequisites	
CEMS 344D	

CEMS 347: Spectroscopy

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.

Credits	2
Prerequisites	
CEMS 216	
Corequisites	
CEMS 347L	

CEMS 347L: Laboratory-Spectroscopy

Credits	0
Corequisites	
CEMS 347	

CEMS 349: X-ray Characterization

This course; which includes a laboratory; introduces x-ray techniques used to characterize materials. Junior standing.

Credits	2
Prerequisites	
CEMS 216	
Corequisites	
CEMS 349L	

CEMS 349L: Laboratory-X-Ray Charact

Credits	0
Corequisites	
CEMS 349	

CEMS 352: Electroceramics

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.

Credits	3
Prerequisites	
CEMS 214 , PHYS 126	

CEMS 368: Introduction to Bioengineering

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. . (Fall)

Credits	3
Prerequisites	
CEMS 214 , BIOL 211	
Semester Offered	Fall

CEMS 397: Glassartengine

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.

Credits	2
Crosslisted	
ART 397	

CEMS 400: Special Topics

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.

Credits	1-4
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CEMS 408**CEMS 409: Methods for Fourier Transform Infrared Spectroscopy**

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.

Credits	1
Prerequisites	
CEMS 235 , CEMS 344 , CHEM 106 & 106L , MATH 151	

CEMS 410: Advanced Ceramic Processing

This course provides knowledge of important relevant issues on the synthesis and processing of advanced materials - discussing materials synthesis and processing through several different techniques; including solid freeform fabrication; laser processing of materials; wet chemical processing; electrohydrodynamic processing; materials consolidation; vapor deposition processing; etc.

Credits	3
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CEMS 411: Science of Whitewares

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.

Credits	3
Prerequisites	
CEMS 203 , CEMS 314	

CEMS 412**CEMS 414****CEMS 415: Porcelain Enamels**

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.

Credits	3
Prerequisites	
CEMS 322	

CEMS 420: Optics and Photonics

The focus of this course is the foundations of linear optics leading to detailed exploration of electronic and vibrational processes in different materials and photonics. Advanced topics include femtosecond laser pulses and THz spectroscopy. Format consists of lectures and hands-on laboratory for research/measurements.

Credits	3
Prerequisites	
CEMS 344 and PHYS 325	

CEMS 423: Mass Transport in Glasses and Melts

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.

Credits	3
Prerequisites	
CEMS 235 , CEMS 322 , CEMS 237	

CEMS 426: Advanced Glass Science

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.

Credits	3
Prerequisites	
CEMS 322	

CEMS 428: Structure & Properties of Optical Glasses

Advanced structure-property correlation of complex glass systems; especially for optical applications will be covered. A special focus are transition metal and rare earth element dopants and ligand field theory and optical spectroscopy.

Credits	3
Prerequisites	
CEMS 332	

CEMS 437: Characterization of Glass and Ceramic Surfaces

This course will give a practical overview of the theory; applications; and limitations of the leading means of characterizing glass and ceramic surfaces.Prerequisites: [CEMS 322](#) - Intro to Glass Science

Credits	3
Prerequisites	
CEMS 322	

CEMS 438: Nanotechnology

The science and engineering of creating materials; functional structures and devices on the nanometer scale. Carbon nanotubes; nanocrystals; quantum dots; nanoscale films and composites; properties of materials as a function of size; self-assembly. Molecular engineering; bionanotechnology; devices and applications.

Credits	3
Prerequisites	
CEMS 214	

CEMS 446: Mechanics of Composites

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.

Credits	3
Prerequisites	
CEMS 214 , CEMS 251 or MECH 241	

CEMS 450: Independent Study

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.

Credits	1-3
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CEMS 460: Biology for Engineers

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

Credits	3
Prerequisites	
	BIOL 211

CEMS 465: Biocompatibility

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.

Credits	4
Prerequisites	
	CEMS 368

CEMS 466: Skeletal Tissue

The skeleton contains 206 bones that provide strength and rigidity yet allow flexibility. However; bone can fail as a result of both disease and insult. In this course we study the hierarchical structure of bone; how disease affects it and; subsequently; its repair both medically and surgically. Offered every year.

Credits	3
Prerequisites	
	CEMS 368

CEMS 468: Biomedical Materials

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.

Credits	3
Prerequisites	
	CEMS 214

CEMS 472: Machine Learning Applications in Battery Life Predictions

Fundamentals of battery chemistry and the degradation mechanisms; battery degradation data acquisition in lab; essential data science skills for analyzing battery data and application of machine learning modeling in the prediction of battery degradation.

Credits	1
Corequisites	
	CEMS 472L

CEMS 472L: Machine Learning Applications in Battery Life Predictions Lab

Fundamentals of battery chemistry and the degradation mechanisms; battery degradation data acquisition in lab; essential data science skills for analyzing battery data and application of machine learning modeling in the prediction of battery degradation.

Credits	0
Corequisites	
	CEMS 472

CEMS 480: Thesis

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.

Credits	2
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CEMS 484

CHEM 105: General Chemistry I

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.

Credits	3
Degree Attributes	CLAS: (F-II) Scientific Knowldg CoB: Natural Science
Corequisites	
	CHEM 105L

CHEM 105L: General Chemistry I Laboratory

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.

Credits	1
Degree Attributes	CLAS: (F-I) Scientific Inquiry CoB: Natural Science
Prerequisites	
	CHEM 105 for 105L
Corequisites	
	CHEM 105LL

CHEM 105LL: General Chemistry I Laboratory Lecture

A discussion of the weekly lab for General Chemistry I. Lab quizzes and exams will be administered during this section.

Credits	0
Corequisites	
	CHEM 105L

CHEM 106: General Chemistry II

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.

Credits	3
Degree Attributes	CLAS: (F-II) Scientific Knowldg CoB: Natural Science
Prerequisites	
	CHEM 105 , CHEM 105
Corequisites	
	CHEM 106L

CHEM 106L: General Chemistry II Laboratory

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.

Credits	1
Degree Attributes	CLAS: (F-I) Scientific Inquiry CoB: Natural Science
Prerequisites	
	CHEM 106 for 106L
Corequisites	
	CHEM 106LL

CHEM 106LL: General Chemistry II Lab Lecture

A discussion of the weekly lab for General Chemistry II. Lab quizzes and exams will be administered during this section.

Credits	0
Corequisites	
	CHEM 106L

CHEM 200: Special Topics in Chemistry

Credits	1-4
Corequisites	
CHEM 200L	

CHEM 300: Special Topics in Chemistry

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.

Credits	1-4
Prerequisites	
CHEM 105 , CHEM 106	

CHEM 310: Basic Organic Chemistry

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.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
CHEM 106 or CHEM 116	

CHEM 315: Organic Chemistry I

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.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
CHEM 106 , CHEM 105	
Corequisites	
CHEM 315L	

CHEM 315L: Laboratory–Organic Chem I

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.

Credits	1
Prerequisites	
For CHEM315L see list below	
Corequisites	
CHEM 315LL	

CHEM 316: Organic Chemistry II

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.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
CHEM 315	
Corequisites	
CHEM 316L	

CHEM 316L: Laboratory–Organic Chem II

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.

Credits	1
Prerequisites	
For CHEM316Lab see list below	
Corequisites	
CHEM 316LL	

CHEM 316LL: Organic Chem II Lab Lecture

A discussion of student projects; the scientific method; and advanced topics germane to the practice of organic chemistry and science. Lab quizzes and exams and other assessments will be administered during this section.

Credits	0
Corequisites	
CHEM 316L	

CHEM 321: Introduction to Analytical Chemistry

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.

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	
CHEM 106 or CHEM 116	
Corequisites	
CHEM 321L	

CHEM 321L: Laboratory–Intro Analyt Chem

Credits	0
Corequisites	
CHEM 321	

CHEM 340: PCHEM: Quantum & Spectroscopy

Fundamentals of quantum mechanics applied to chemical systems; atomic and molecular structure; computational chemistry; and spectroscopy.

Credits	3
Prerequisites	
CHEM 106 ; MATH 152 ; PHYS 112 or 126.	

CHEM 341: Physical Chemistry Laboratory

Explores concepts in thermodynamics; kinetics; and quantum mechanics through six team-based experiments in a simulated research environment.

Credits	1
Corequisites	
CHEM 340	

CHEM 342: PCHEM: Thermo & kinetics

Foundations and applications of classical and statistical thermodynamics; chemical kinetics; and molecular dynamics.

Credits	4
Prerequisites	
CHEM 106 , MATH 152 , PHYS 112 or 126	

CHEM 343: Physical Chemistry I

The first semester of our physical chemistry sequence covers thermodynamics from a combined classical/statistical perspective and chemical kinetics.

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	
CHEM 106 ; MATH 152 ; and PHYS 112 or 126.	

CHEM 345: Physical Chemistry Laboratory

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. Prerequisites: [CHEM 343](#) or [CEMS 235](#).

Credits	1
Degree Attributes	CoB: Natural Science
Prerequisites	
CHEM 343 or CEMS 235	

CHEM 346: Physical Chemistry II

The second semester of our physical chemistry sequence covers quantum mechanics and spectroscopy.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
CHEM 343 or CEMS 235	

CHEM 370: Chemistry Projects

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](#)).

*Prerequisites: Permission of instructor; a study plan approved by the Division Chair; and [CHEM 106](#).

Credits	1-2
Prerequisites	
CHEM 106	

CHEM 372: Inorganic Chemistry

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).

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
CHEM 343 or CEMS 235	

CHEM 374: Inorganic Chemistry Laboratory

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.

Credits	1
Degree Attributes	CoB: Natural Science
Prerequisites	
CHEM 106 , CHEM 372	
Corequisites	
CHEM 372	

CHEM 400: Advanced Chemistry Topics

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.

Credits	1-4
Degree Attributes	CoB: Natural Science
Prerequisites	
CHEM 106 , MATH 151	

CHEM 420: Biochemistry: Proteins and Metabolism

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.

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	
Either [BIOL 211 and CHEM 316] or [BIOL 211 and [CHEM 343 or CEMS 235]; and [CHEM 310 or CHEM 315]	
Corequisites	
CHEM 420L	
Crosslisted	
CEMS 564	

CHEM 420L: Laboratory-Biochem: Prot/Metab

Credits	0
Corequisites	
CHEM 420	
Crosslisted	
CEMS 564L	

CHEM 422: Biochemistry: Nucleic Acids

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](#).)

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	
BIOL 211 , CHEM 315 , CHEM 316 or BIOL 211 and CHEM 343 or CEMS 235 and CHEM 310 OR CHEM 315	

CHEM 423: Instrumental Analysis

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.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
CHEM 321 , CHEM 346	

CHEM 450: Independent Study

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.

Credits	1-4
Prerequisites	
CHEM 343	

CHEM 461: Advanced Chemistry Laboratory I

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.

Credits	2
Degree Attributes	CoB: Natural Science
Prerequisites	
CHEM 321 , CHEM 340	
Corequisites	
CHEM 423	

CHEM 465: Advanced Lab I

A laboratory course primarily focused on mastering characterization techniques using instrumentation within the department to solve independent unknowns as well as an introduction to computational chemistry.

Credits	1
Prerequisites	
24 Credits of Chem Classes	

CHEM 466: Advanced Lab II

A continued exploration into advanced chemical instrumentation available on campus and/or nearby. Students will have the opportunity to practice peer mentorship in a research setting in concert with an upper-level chemistry lab course or perform an independent research project.

Credits	1
Prerequisites	
24 Credits of Chem Classes, CHEM 465	

CHEM 485: Internship in Chemistry

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. Prerequisites: 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.

Credits	1-6
Prerequisites	
	CHEM 343

CHEM 490: Chemistry Seminar

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.

Credits	1
Degree Attributes	CoB: Natural Science

CHIN 101: Chinese I

This course is an introduction to the Mandarin Chinese language and cultures of the People's Republic of China.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities

CHIN 102: Chinese II

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.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities
Prerequisites	
	CHIN 101

CHIN 200: Special Topics

Content varies.

Credits	1-4
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CHIN 201: Chinese III

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.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities
Prerequisites	
	CHIN 102

CHIN 202: Chinese IV

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.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities
Prerequisites	
	CHIN 201

CHIN 300: Special Topics

Subject matter not covered in other courses. Topics vary from one semester to another.

Credits	2-4
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CHIN 301: Advanced Conversation & Comp I

This is an advanced-level course designed to further develop students’ proficiency in spoken and written Mandarin Chinese and understanding of Chinese culture. (Fall)

Credits	4
Prerequisites	
CHIN 202	
Semester Offered	Fall

CHIN 302: Advanced Conversation and Composition - II

Advanced Conversation and Composition II is a continuation of the advanced-level of Chinese; aimed at further enhancing students’ speaking and writing abilities in Mandarin Chinese.

Credits	4
Prerequisites	
CHIN 301	

CHIN 450: Independent Study

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.

Credits	1-4
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CLAS 100: Special Topics in Liberal Arts and Sciences

Opportunities are provided for the examination of interdisciplinary topics not normally justified as regular offerings. Topics vary from year to year.

Credits	1-4
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CLAS 101: Transfer Seminar

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.

Credits	1
Degree Attributes	CLAS: (FYE) First Year Exper CoB: Humanities

CLAS 102: FYE Portfolio

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.

Credits	0
Degree Attributes	CLAS: (FYE) First Year Exper

CLAS 201: The Big Questions: Humanities for Engineers

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)

Credits	3
Degree Attributes	SoE: Other Humanities/Soc Sci

COAC 291: Philosophy Principles and Organization of Athletics in Education

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.

Credits	3
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COAC 301: Health Sciences Applied to Coaching

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.

Credits	3
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COAC 475: Theories and Techniques of Coaching Sports

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 policies of athletics. An internship that includes practical experience as a coach in a specific sport and/or periods of observing other coaches is required.

Credits	2
Prerequisites	COAC 291 , COAC 301 prev or concurrently

COAC 485: Coaching Sports Internship

This internship is for students who wish to gain certification to coach in a second sport.

Credits	1
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COM 216: Video Production

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts

COMM 100: Topics in Communication

This course provides opportunities for examining communication studies areas not covered in the regular offerings. Topics vary each semester.

Credits	1-4
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COMM 101: Introduction to Communication Studies

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.

Credits	4
Degree Attributes	CoB: Social Science

COMM 110: Mass Media and American Life

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.

Credits	4
Degree Attributes	CoB: Social Science SoAD: Humanities-'Other'

COMM 200: Special Topics in Communication

This course provides opportunities for examining communication studies areas not covered in the regular offerings. Topics vary each semester.

Credits	1-4
Degree Attributes	CoB: Social Science

COMM 205: Introduction to News and Media

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.

Credits	4
Degree Attributes	CoB: Humanities

COMM 210: Interpersonal Communication

This course is designed to increase students' awareness of interpersonal communication theories; practices; and impact.

Credits	4
Degree Attributes	CoB: Social Science

COMM 215: Introduction to Film Studies

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. (Fall)

Credits	4
Degree Attributes	CLAS: (C) The Arts
Semester Offered	Fall

COMM 216: Video Production

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts

COMM 217: Social Media and Society

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.

Credits	4
Degree Attributes	CoB: Social Science

COMM 220: Understanding Popular Culture and Media

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts CoB: Social Science SoAD: Humanities-'Other'

COMM 221: Pop Culture Goes Global

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. (Fall)

Credits	4
Degree Attributes	AU: Global Perspective CoB: Social Science
Crosslisted	
GLBS 221	
Semester Offered	Fall

COMM 237: Media and Politics

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.

Credits	4
Degree Attributes	CoB: Social Science
Crosslisted	
	POLS 237 ; SOCI 237

COMM 300: Special Topics

This course provides opportunities for examining communication studies areas not covered in the regular offerings. Topics vary each semester.

Credits	1-4
Degree Attributes	CoB: Social Science

COMM 301: Broadcasters Advertisers and Audiences

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.

Credits	4
Degree Attributes	CoB: Social Science

COMM 302: Public Relations Principles

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.

Credits	4
Degree Attributes	CoB: Social Science AU: Service Learning Courses

COMM 303: AI & Digital Literacies

In this course; we will explore the shift from print to digital cultures; along with the development of generative AI; and their impacts on how we write; learn; work; interact with others; and know things about the world. Students will gain the skills to responsibly leverage digital composition and generative tools for a variety of writing situations. (Every other spring)

Credits	4
Semester Offered	Every other spring

COMM 304: History of the Motion Picture

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)

Credits	4
Degree Attributes	CLAS: (C) The Arts
Semester Offered	On demand

COMM 309: Persuasion: Reception and Responsibility

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.

Credits	4
Degree Attributes	CoB: Social Science

COMM 315: Understanding Global Media and Cultural Change

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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Social Science
Crosslisted	
GLBS 315	
Semester Offered	Every other spring

COMM 323: Alphadelphian

Students will work together to produce the annual newsletter of the Women’s and Gender Studies program. Along the way; we will analyze media representation of feminist issues; brainstorm topics; conduct research; and write feature articles; formulate questions; conduct interviews; and write profiles; workshop; copyedit; and proofread; and reflect on what it means to be part of the WGST community.

Credits	2
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COMM 325: Global Communication

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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Social Science
Crosslisted	
GLBS 325	

COMM 400: Special Topics

This course provides opportunities for examining communication studies areas not covered in the regular offerings. Topics vary each semester.

Credits	1-4
Degree Attributes	CoB: Social Science

COMM 401: Technology and Communication

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.

Credits	4
Degree Attributes	CoB: Social Science

COMM 409: Organizational Communication

This course introduces students to major concepts regarding communication in organizations; including the professional environment.

Credits	4
Degree Attributes	CoB: Social Science

COMM 410: Communication Ethics

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
COMM 101 , COMM 110	

COMM 426: Screenwriting

This course is an advanced writing workshop that concentrates on the principles and techniques of industry standard three act screenplays.

Credits	4
Prerequisites	
COMM 205 or ENGL 102	

COMM 450: Independent Study

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.

Credits	1-4
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COMM 451: Publishing Practicum

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.

Credits	4
Prerequisites	
ENGL 102	

COMM 465: Gender Race Class and Media

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
COMM 110	

COMM 475: Specialized Reporting

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.

Credits	4
Prerequisites	
COMM 205	

COMM 485: Internship in Communication

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.

Credits	1-4
Prerequisites	
COMM 101	

COOP 385: Cooperative Education

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.

Credits	3
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CRIM 200: Special Topics

Credits	1-4
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CRIM 245: Crime and Society

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.

Credits	4
Prerequisites	SOCI/ SJST 110

CRIM 300: Special Topics

An open course varying in contents from year to year; which allows concentration on special topics.

Credits	1-4
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CRIM 332: Focusing on Police

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.

Credits	2
Degree Attributes	CoB: Social Science
Prerequisites	SOCI 245

CRIM 340: Concepts of Penology

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	SOCI/ SJST 110 , SOCI 245

CRIM 344: Sociology of Deviance & Criminal Behavior

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.

Credits	4
Prerequisites	SOCI/ SJST 110

CRIM 351: Seminar in Criminal Behavior

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. Senior standing.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	SOCI 245

CRIM 400: Special Topics

An open course varying in contents from year to year; which allows concentration on special topics.

Credits	1-4
Degree Attributes	CoB: Social Science

CRIM 450: Independent Study

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.

Credits	1-4
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CRIM 451: Seminar in Criminal Behavior

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. Senior standing.

Credits	4
Prerequisites	SOC 245

CRIM 470: Field Work in Criminal Justice Studies

Students work with criminal justice related agencies and are expected to apply their theoretical knowledge to the practical experience gained from field work. Prerequisites: Senior standing; minimum 2.5 overall GPA and permission of instructor.

Credits	2-4
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CSCI 156: Computer Science I

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.

Credits	4
Degree Attributes	CoB: Natural Science
Corequisites	MATH 131

CSCI 157: Computer Science II

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.

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	CSCI 156
Corequisites	MATH 151

CSCI 205: Database Systems

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.

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	CSCI 156

CSCI 206: Algorithm Design

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. (Fall)

Credits	4
Prerequisites	CSCI 156 , CSCI 157
Semester Offered	Fall

CSCI 225: Computer Organization

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.

Credits	4
Prerequisites	
CSCI 156	

CSCI 305: Theory of Computation

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. (Fall/Spring)

Credits	4
Prerequisites	
MATH 181 OR 281	
Semester Offered	Fall and Spring

CSCI 311: Database Systems

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.

Credits	4
Prerequisites	
CSCI 156	

CSCI 315: Computer Networking

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.

Credits	4
Prerequisites	
CSCI 156	

CSCI 400: Special Topics

Special topics in computer science which may vary from year to year. Prerequisite: Permission of the department.

Credits	1-4
Prerequisites	
CSCI 156	

CSCI 425: Operating Systems

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.

Credits	4
Prerequisites	
CSCI 225	

CSCI 450: Independent Study

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. [CSCI 206](#) is typically a required prerequisite. Open to qualified third- and fourth-year students. [CSCI 450](#) is required of all candidates for departmental honors in computer science.

Credits	1-4
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DANC 120: Fundamentals of Dance

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+) AU: Wellness (Fall '19)

DANC 200: Special Topics in Dance

Courses offered according to students' interests. Topics vary from year to year. (Sufficient demand)

Credits	1-4
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DANC 211: Dance History

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.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities-'Other' SoE: Other Humanities/Soc Sci

DANC 212: Wanderlust: The connection between walking creativity and place

In this course students will explore walking in relationship to perception; the body; the creative process; place; and areas of their personal interests in a variety of rural; agricultural; wild; and urban settings.

Credits	4
Degree Attributes	CLAS: (C) The Arts

DANC 214: Embodied Anatomy

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts

DANC 222: Modern Dance I

An introductory course in various modern dance techniques including some improvisational work. May be repeated one time for credit.

Credits	2
Degree Attributes	CLAS: (C) The Arts AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+) AU: Wellness (Fall '19)

Prerequisites
DANC 120

DANC 223: Jazz Dance I

An introductory course in jazz dance technique incorporating performing aspects of the jazz medium.

Credits	2
Degree Attributes	CLAS: (C) The Arts AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+) AU: Wellness (Fall '19)

Prerequisites
DANC 120

DANC 224: Contact Improvisation

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+) AU: Wellness (Fall '19)
Prerequisites	
DANC 120	

DANC 225: Laban Movement Analysis

An 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.

Credits	4
Degree Attributes	CLAS: (C) The Arts AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)
Prerequisites	
DANC 120	

DANC 226: Hip Hop Dance

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts AU: Phys Fitness (Fall '19+) AU: Wellness (Fall '19)

DANC 227: African Dance

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts AU: Global Perspective AU: Phys Fitness (Fall '19+) AU: Wellness (Fall '19)

DANC 230: Improvisation/Composition I

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.

Credits	4
Prerequisites	
DANC 120	

DANC 270: Alfred University Dance Theatre

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.

Credits	2
Prerequisites	
DANC 230 , DANC 330	

DANC 322: Modern Dance II

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.

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)
Prerequisites	
	DANC 222

DANC 323: Jazz Dance II

A continuation of the beginning course for students already able to move within the jazz idiom. It includes more advanced work in jazz technique as well as combinations. May be repeated 4 times for credit to a maximum of 10 credit hours.

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)
Prerequisites	
	DANC 223

DANC 325: Laban Movement Applications

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](#))

Credits	2
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DANC 330: Improvisation/Composition II

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.

Credits	4
Prerequisites	
	DANC 230 or 330 and one of the following: DANC 120 ; 221; 222; or 223; or permission of instructor.

DANC 331: Site Specific Composition

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.

Credits	4
Prerequisites	
	(ART or IART 101) or DANC 230

DANC 340: New and Existing Repertory

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.

Credits	2
Prerequisites	
	2 Dance Courses

DANC 370: Choreographic Practicum

This course provides the advanced student with the opportunity to choreograph new dance works under faculty supervision. . Repeatable up to six credits.

Credits	2
Prerequisites	
	DANC 230

DANC 385: Dance Internship

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. Prerequisites: junior standing and permission of instructor.

Credits	4
Prerequisites	
	DANC 120

DANC 450: Independent Study

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.

Credits	1-4
Prerequisites	
	DANC 120

DANC 495: Dance Capstone

Students prepare a major dance concert as a culmination of their choreographic work. Production; promotion and coordination are each student's responsibility with support and guidance from the Performing Arts Division.

Credits	4
Degree Attributes	Creative Disc (not used)
Prerequisites	
	DANC 430

DANC 496: Dance Capstone II

This class is the second capstone for students in the Dance Concentration of the Interdisciplinary BFA. In this course students refine their interdisciplinary work into a final project and reflection. Senior Standing (Spring)

Credits	4
Prerequisites	
	DANC 495

DATA 105: Analytics Perspectives

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.

Credits	1
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DATA 156: Introduction to Computing

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.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
	MIS 101

DATA 201: Analytics II

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.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
	BUSI 113 , MIS 101

DATA 202: Data Visualization and Analysis

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.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
MIS 101	

DATA 203: Current Topics in Analytics

Students delve into the dynamic world of analytics and its real-world applications and methods across diverse career paths and industries. Exploration of data-driven analysis and its transformational effects in a variety of fields. Ethics; biases; and societal impacts will also be explored.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
DATA 201	

DATA 205: Intro to Database Management

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.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
MIS 101	

DATA 311: Intro to Database Management

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.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
MIS 101	

DATA 401: Analytics Capstone Project

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.

Credits	3
Degree Attributes	CoB: Field Experience
Prerequisites	
BUSI 113 , DATA 201 , DATA 202 , MIS 101	

DATA 402: Analytics Seminar

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.

Credits	1
Prerequisites	
DATA 401	
Corequisites	
DATA 401	

DATA 450: Independent Study

Credits	1-4
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DUMB 100: Dummy Course - Reg Use

Credits	0
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ECON 100: Topics in Economics

Topics not covered in other economics courses are presented.

Credits	1-4
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ECON 201: Principles of Microeconomics

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.

Credits	3
Degree Attributes	CLAS: (E2) Soc Sci-Pols/Econ CoB: Social Science

ECON 202: Principles of Macroeconomics

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.

Credits	3
Degree Attributes	CoB: Social Science

ECON 300: Topics in Economics

Topics not covered in other Economics courses are presented.

Credits	1-4
Degree Attributes	CoB: Social Science

ECON 310: Applied Econometrics and Predictive Analytics

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.

Credits	3
Degree Attributes	CoB: Social Science
Prerequisites	
BUSI 113 , DATA 201 , MIS 101	

ECON 320: Sports Economics

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
ECON 201	

ECON 331: Money and Banking

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.

Credits	3
Degree Attributes	CoB: Social Science
Prerequisites	
ECON 201 , ECON 202	

ECON 412: International Economics

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.

Credits	3
Degree Attributes	AU: Global Perspective CoB: Social Science
Prerequisites	ECON 201 , ECON 202

ECON 420: Healthcare Economics

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.

Credits	3
Degree Attributes	CoB: Social Science

ECON 425: Wealth and Inequality

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.

Credits	4
Degree Attributes	CoB: Social Science

ECON 445: Managerial Economics

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.

Credits	3
Degree Attributes	CoB: Social Science
Prerequisites	FIN 348
Crosslisted	MBA 651

ECON 450: Independent Study

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.

Credits	1-4
Degree Attributes	CoB: Social Science

ECON 460: Seminar in Economics

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.

Credits	3
Degree Attributes	CoB: Social Science
Prerequisites	One ECON Course 300 or higher

ECON 462: Industrial Organization

In this course; the theory of the firm is extended using the structure-conduct-performance paradigm and more recent theories of industrial organization. An important portion of the course is allocated to presentation of factual and institutional material on market structure; firm conduct; industry performance; and antitrust policy. Prerequisites: [ECON 201/202](#) and junior standing.

Credits	3
Degree Attributes	CoB: Social Science

EDUC 100: Topics in Education

Topics not covered in other Education courses are presented. May be repeated for credit.

Credits	1-4
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EDUC 105: Education Perspectives

This course introduces the field of education and the resources available at Alfred University necessary for academic; personal; and professional accomplishment in the field.

Credits	1
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EDUC 120: School Violence Prevention and Intervention Workshop (SAVE)

This workshop provides teacher candidates with training in school violence prevention and intervention. Topics include: the warning signs that relate to violence or signal precursors to violent behavior in children; the statutes; regulations and policies relating to a safe; nonviolent school climate; academic supports and management strategies that promote a nonviolent school climate; methods for integrating social skill development and problem-solving skills into ongoing curriculum and instruction; intervention techniques for addressing violent situations; and; referral processes for students with violent behaviors. This course must be completed prior to student teaching.

Credits	0
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EDUC 121: Child Abuse Identification and Reporting Workshop

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.

Credits	0
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EDUC 122: Dignity for All Students Workshop (DASA)

This workshop fulfills the training requirement on harassment; bullying; and discrimination prevention and intervention under the NYS Dignity for All Students Act. This is a participatory workshop which includes activities to help students understand and address personal and hidden biases as well as related behaviors and the school setting. Topics include: introduction to the Dignity for All Students Act and reporting requirements for educators and more. This course must be taken prior to student teaching.

Credits	0
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EDUC 230: Psychological Foundations of Education

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.

Credits	3
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EDUC 231: Social Foundations of Education

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.

Credits	3
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EDUC 300: Special Topics

Topics not covered in other Education courses are presented. May be repeated for credit.

Credits	1-4
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EDUC 305: Integration of Computer Science and Computational Thinking in K-12 Education

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.

Credits	3
Prerequisites	
EDUC 230 and EDUC 231	

EDUC 345: Education Fieldwork

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.

Credits	3
Prerequisites	
EDUC 230 and EDUC 231	

EDUC 374: Integrated Methods: Social Studies Science Mathematics and Computer Application

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.

Credits	6
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EDUC 375: Early Childhood/Childhood Practicum

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.

Credits	3
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EDUC 400: Topics in Education

Topics not covered in other Education courses are presented.

Credits	1-4
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EDUC 405: Literacy in the Content Area

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.

Credits	3
Prerequisites	
EDUC 230 and EDUC 231	

EDUC 413: Using Literature in Intermediate and Adolescent Classrooms

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.

Credits	3
Prerequisites	
EDUC 230 and EDUC 231	

EDUC 450: Independent Study

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.

Credits	1-4
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EDUC 460: Seminar in Teaching and Professional Development

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.

Credits	3
Corequisites	
EDUC 462	

EDUC 461: Student Teaching for Early Childhood/ Childhood Certification

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.

Credits	12
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EDUC 462: Student Teaching for Middle/Adolescent Certification

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.

Credits	12
Corequisites	
EDUC 460	

EDUC 463: Student Teaching-Art Education

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.

Credits	12
Corequisites	
EDUC 464	

EDUC 464: Seminar in Professional Development: Visual Arts

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.

Credits	3
Corequisites	
EDUC 463	

EDUC 471: Methods of Teaching Literacy

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.

Credits	6
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EDUC 472: Competency Skills in Teaching Literacy

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: Admission into Student Teaching in Early Childhood/Childhood Education.

Credits	3
Prerequisites	EDUC 471

EDUC 473: Assessment in the Early Childhood/ Childhood Classroom

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.

Credits	3
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EDUC 474: Orientation and Assessment in the Early Childhood/Childhood Classroom

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.

Credits	3
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EDUC 488: Current Teaching Methods: Middle Childhood Subjects

Discussion of goals; methods; and materials used to successfully teach middle childhood subjects. Classroom observation and teaching required. Declaration of minor in education required

Credits	3
Prerequisites	EDUC 230 and EDUC 231

EDUC 489: Current Teaching Methods: Adolescent Subjects

Discussion of goals; methods; and materials used to successfully teach middle/adolescence and special subjects. Declaration of minor in education required

Credits	3
Prerequisites	EDUC 230 and EDUC 231

EDUC 491: Methods and Curriculum in Art Education

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. Declaration of minor in education required.

Credits	3
Prerequisites	EDUC 230 and 231; EDUC 345

ELEC 210: Digital Logic

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.

Credits	4
Corequisites	ELEC 210L

ELEC 210L: Laboratory-Digital Logic

Credits	0
Corequisites	
ELEC 210	

ELEC 220: Circuit Theory I

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.

Credits	4
Prerequisites	
PHYS126; pre-or-coreq: MATH271	
Corequisites	
ELEC 220L	

ELEC 220L: Laboratory-Circuit Theory I

Credits	0
Corequisites	
ELEC 220	

ELEC 223: Electrical Engineering Laboratory for Non-EE

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.

Credits	2
Prerequisites	
MATH 152 , PHYS 126	

ELEC 310: Microprocessor Systems and Applications

Microcomputer components; registers; buses; and memory systems; machine instructions; machine language arithmetic; assembly language; microprocessor interfacing.

Credits	4
Prerequisites	
ELEC 210	
Corequisites	
ELEC 310L	

ELEC 310L: Laboratory-Microproc Sys/Apps

Credits	0
Corequisites	
ELEC 310	

ELEC 320: Circuit Theory II

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.

Credits	4
Prerequisites	
ENGR 220 or ELEC 220	
Corequisites	
ELEC 320L	

ELEC 320L: Laboratory-Circuit Theory II

Credits	0
Corequisites	
ELEC 320	

ELEC 322

ELEC 325: Data Acquisition

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).

Credits	2
Prerequisites	ENGR 220 or ELEC 223 , MATH 271 , PHYS 126

ELEC 330: Python for Power Systems

Modern Power Systems require plug-ins for software and hardware applications. To use AI in the systems; a common approach is to use a popular computer language such as Python. The course contents include flow charts; codes; folder trees; contemporary platforms such as YOLOv8 to identify the objects such as components in the systems. A top-down approach will be utilized in the teaching/learning processes. 15 hours' lectures and 15 hours' labs.

Credits	1
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ELEC 330L: Python for Power System Lab

Credits	0
Corequisites	ELEC 330

ELEC 354: Device Electronics

Semiconductor devices and circuits. Unipolar. bipolar; and MOS devices. Introduction to amplifiers; oscillators; and filters.

Credits	3
Prerequisites	MATH 271

ELEC 355: Power System Operations and Economics

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.

Credits	3
Prerequisites	ENGR 220 , MATH 253 , MATH 271 , RNEW320

ELEC 356: Electronic Circuits

Analysis and design of small signal and large signal electronic amplifiers. Frequency response; feedback; operational amplifiers. Prerequisite: [ELEC 354](#).

Credits	4
Prerequisites	ELEC 354
Corequisites	ELEC 356L

ELEC 356L: Laboratory-Electronic Circuits

Credits	0
Corequisites	ELEC 356

ELEC 422: Control Systems

Linear feedback control system modeling analysis; and compensation techniques.

Credits	3
Prerequisites	ELEC 322 or RNEW 322

ELEC 423: Digital Controls

Credits	3
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ELEC 433: Modern Electrical Grids and Electricity Markets for 100% Renewable

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.

Credits	1
Prerequisites	
ENGR 220	

ELEC 441: Advanced Power Electronics

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.

Credits	1
Prerequisites	
ENGR 220	

ELEC 442: Applied Electromagnetism

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.

Credits	3
Prerequisites	
MATH 271 , PHYS 126	

ELEC 454: Advanced Transmission and Distribution Systems

Advanced Transmission and Distribution Systems are critically needed for power grids with renewables penetrations. The course emphasizes analytics; optimization; reliability; operation metrics; switching; planning and trouble shooting. Renewables are known as DERs (distributed energy resources); which supply power to transmission and distribution system. SCADA (Supervisory Control and Data Acquisition) is part of the systems. Lab is completed within course.

Credits	1
Prerequisites	
ENGR 220	

ENGL 100: Special Topics

Credits	1-4
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ENGL 101: Writing I

Study and application of the basic principles of written communication: correctness; clarity; concreteness; effective organization; and accepted forms of documentation.

Credits	4
Degree Attributes	CLAS/AU: (01) Written Comm

ENGL 102: Writing II

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.)

Credits	4
Degree Attributes	CLAS/AU: (01) Written Comm
Prerequisites	
ENGL 101 or equivalent	

ENGL 103: Business Writing

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.

Credits	4
Prerequisites	
	ENGL 101 or equivalent

ENGL 200: Special Topics in Writing

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.

Credits	2-4
Degree Attributes	CoB: Humanities

ENGL 202: Fiction Workshop

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts CoB: Humanities

ENGL 205: Playmaking: From Writing to Devising For the New Era

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](#))

Credits	4
Degree Attributes	CLAS: (C) The Arts CoB: Humanities

ENGL 206: Poetry Workshop

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts CoB: Humanities

ENGL 213: Introduction to Poetry

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.

Credits	2-4
Degree Attributes	CLAS: (A) Literature CoB: Humanities SoAD: Humanities-'Other'

ENGL 214: Literature in Action: Drama Self & Society

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.

Credits	2-4
Degree Attributes	CLAS: (A) Literature CoB: Humanities SoAD: Humanities-'Other'

ENGL 217: Blood Guts and Alphabets: The Gory Truth about Children's Literature

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)

Credits	4
Degree Attributes	CLAS: (A) Literature CoB: Humanities SoAD: Humanities-'Other'

ENGL 218: Beyond Enchantment: Fairy Tales as Literature

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; psychoanalytic; and feminist point of view.

Credits	4
Degree Attributes	CLAS: (A) Literature CoB: Humanities SoAD: Humanities-'Other'

ENGL 220: Special Topics in Literature

A series of introductory courses; each being a study of literature not covered in other 200-level courses.

Credits	2-4
Degree Attributes	CLAS: (A) Literature CoB: Humanities SoAD: Humanities-'Other'

ENGL 222: The Harlem Renaissance

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.

Credits	4
Degree Attributes	CLAS: (A) Literature CoB: Humanities SoAD: Humanities-'Other'
Crosslisted	
SJST 222	

ENGL 225: Shakespeare and Cinema

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.

Credits	2-4
Degree Attributes	CLAS: (A) Literature CoB: Humanities SoAD: Humanities-'Other'

ENGL 226: The Holocaust and Literature

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.

Credits	4
Degree Attributes	CLAS: (A) Literature AU: Global Perspective CoB: Humanities SoAD: Humanities-'Other'
Crosslisted	
SJST 226	

ENGL 230: Special Topics in Film

A series of introductory courses; each being a study of film not covered in other 200-level film courses.

Credits	2-4
Degree Attributes	CLAS: (C) The Arts CoB: Humanities

ENGL 243: Lunatics Lovers and Poets: Southern Storytellers

Southerners don't hide their skeletons in closets; they invite them into the living room to entertain at tea. This course focuses on works which examine what Flannery O'Connor defined as the Southern grotesque-individuals forced to meet the extremes of their own nature. Exploring the world created when tragic merges with comic; other writers might include Faulkner; Williams; Welty; Percy; Crews; Dickey; and Tyler.

Credits	2-4
Degree Attributes	CLAS: (A) Literature CoB: Humanities SoAD: Humanities-'Other'

ENGL 254: Women Writers

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.

Credits	2-4
Degree Attributes	CLAS: (A) Literature CoB: Humanities SoAD: Humanities-'Other'
Crosslisted	
SJST 254 ; WGST 254	

ENGL 256: Multicultural American Literature

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.

Credits	4
Degree Attributes	CLAS: (A) Literature CoB: Humanities SoAD: Humanities-'Other'
Crosslisted	
SJST 256 ; WGST 256	

ENGL 261: Utopian and Dystopian Literature

One person's perfect world is someone else's nightmare. This course will study fictional representations of alternate timelines and universes. Which literary upheavals or catastrophes seem all too plausible in real life? Which differences in social constructions; including race; gender; and class; have the power to change the world as we know it?

Credits	4
Degree Attributes	CLAS: (A) Literature

ENGL 271: Trauma and Creativity

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.

Credits	4
Degree Attributes	CLAS: (A) Literature CoB: Humanities SoAD: Humanities-'Other'

ENGL 272: Mysticism

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.

Credits	4
Degree Attributes	CLAS: (A) Literature CoB: Humanities SoAD: Humanities-'Other'

ENGL 281: Literature and Science

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.

Credits	2-4
Degree Attributes	CLAS: (A) Literature CoB: Humanities SoAD: Humanities-'Other'

ENGL 292: Tales of Terror

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.

Credits	2-4
Degree Attributes	CLAS: (A) Literature CoB: Humanities SoAD: Humanities-'Other'

ENGL 293: Writers Gone Wild: Literature and the Environment

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?

Credits	4
Degree Attributes	CLAS: (A) Literature CoB: Humanities SoAD: Humanities-'Other'

ENGL 303: AI & Digital Literacies

In this course; we will explore the shift from print to digital cultures; along with the development of generative AI; and their impacts on how we write; learn; work; interact with others; and know things about the world. Students will gain the skills to responsibly leverage digital composition and generative tools for a variety of writing situations. (Alternating Spring)

Credits	4
Prerequisites	ENGL 101 or equivalent, ENGL102,103, ENGR 110
Semester Offered	Alternate Spring

ENGL 323: Alphadelphian

Students will work together to produce the annual newsletter of the Women’s and Gender Studies program. Along the way; we will analyze media representation of feminist issues; brainstorm topics; conduct research; and write feature articles; formulate questions; conduct interviews; and write profiles; workshop; copyedit; and proofread; and reflect on what it means to be part of the WGST community.

Credits	2
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ENGL 325: Survey of British Literature I

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.

Credits	3
Degree Attributes	CoB: Humanities SoAD: Humanities-'Other'
Prerequisites	
One 200-Lvl Literature Course	

ENGL 326: Survey of British Literature II

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.

Credits	3
Degree Attributes	CoB: Humanities SoAD: Humanities-'Other'
Prerequisites	
One 200-Lvl Literature Course	

ENGL 327: Survey of American Literature

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.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities-'Other'
Prerequisites	
One 200-Lvl Literature Course	

ENGL 328: The Language of Literary Art

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.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities-'Other'
Prerequisites	
ENGL 102	

ENGL 400: Topics in Literature

Advanced study of a topic in literature not covered by other 400-level courses.

Credits	1-4
Degree Attributes	CoB: Humanities

ENGL 401: Topics in Writing

Advanced study of a topic in writing not covered by other 400-level courses.

Credits	1-4
Prerequisites	
ENGL 328 or 200 level creative	

ENGL 402: British Gothic Fiction

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.

Credits	4
Degree Attributes	SoAD: Humanities-'Other'

ENGL 406: A Medieval Bookshelf

This course introduces students to the connections between medieval English literature; its classical sources; and medieval European literatures.

Credits	4
Degree Attributes	CoB: Humanities
Prerequisites	
See Catalog Course Description	

ENGL 407: Chaucer

This course introduces students to Chaucer's works. All readings are in Middle English; and students will gain competence in reading and pronouncing Chaucer's English. Readings include The Book of the Duchess; excerpts from The Legend of Good Women; Troilus and Criseyde; and excerpts from The Canterbury Tales.

Credits	4
Degree Attributes	CoB: Humanities
Prerequisites	
See Catalog Course Description	

ENGL 408: Women Writers in the Middle Ages

This course examines the writings of medieval women - abbesses; merchants; wives; mothers; and mystics - to explore the challenges female writers such as Heloise; Margery Kempe; Julian of Norwich; and Christine de Pizan presented to orthodox Christianity; to gender stereotypes; and to medieval political and social structures.

Credits	4
Degree Attributes	CoB: Humanities
Prerequisites	
See Catalog Course Description	
Crosslisted	
WGST 408	

ENGL 409: American Realism: Race/Class/Gender/Place

Realism claims to offer life as it is actually lived; to offer not the Truth but the truths of human experience. Through both classic and new-canonical works of realism; naturalism; and regionalism; this course explores how individuals are located in social and geographic places.

Credits	4
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ENGL 410: English Renaissance Literature

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.

Credits	4
Degree Attributes	CoB: Humanities

ENGL 411: Shakespeare's Comedies and Histories

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.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities-'Other'

ENGL 412: Shakespeare's Tragedies

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.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities-'Other'

ENGL 413: The Eighteenth Century

This course explores the works of such authors as Jane Austen; Oliver Goldsmith; Matthew Lewis; Lady Mary Wortley Montagu; and Jonathan Swift against the background of eighteenth-century values and ideas. Genres include the novel; drama; and poetry.

Credits	4
Degree Attributes	CoB: Humanities

ENGL 414: English Romantic Movement

This course focuses on the well-known works of Blake; Wordsworth; Coleridge; Byron; Shelley; and Keats as well as on the less well known but important works of writers such as Anna Barbauld; Mary Robinson; and John Clare. Poems will be supplemented by works of fiction associated with British Romanticism such as Mary Shelley's Frankenstein.

Credits	4
Degree Attributes	CoB: Humanities

ENGL 415: Victorian Literature

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.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities-'Other'

ENGL 422: Irish Literature: 1690–Present

A nation rich in song and story; Ireland has produced a distinctive national literature. This course explores three centuries of Irish writing. Genres include narrative; drama; and poetry. Selections include Swift; O'Rathaille; O'Bruadair; Mangan; Wilde; Shaw; Pearse; Yeats; Joyce; Heaney; and Kavanagh.

Credits	4
Degree Attributes	CoB: Humanities

ENGL 424: Life and Art of James Joyce

This course focuses on Joyce's fiction; including Dubliners; A Portrait of the Artist as a Young Man; Ulysses; and selections from Finnegans Wake. Biographical readings will accompany the literature; and Homer's Odyssey will be studied in parallel with Joyce's Ulysses.

Credits	4
Degree Attributes	CoB: Humanities

ENGL 431: 19th Century American Literature

This course explores the diverse literary experiments of a nation striving toward cultural and aesthetic independence. Readings and critical perspectives vary according to instructors.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities-'Other'

ENGL 432: 20th Century American Visions

This course examines modern and postmodern literary experiments as manifested in American culture. Readings and critical treatments vary according to instructors.

Credits	4
Degree Attributes	CoB: Humanities

ENGL 433: British and American Poetry

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.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities-'Other'

ENGL 434: African-American Literature

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.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities-'Other'

ENGL 442: Modern and Contemporary Drama

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.

Credits	2-4
Degree Attributes	CoB: Humanities SoAD: Humanities-'Other'

ENGL 445: Modernism

An examination of innovative poetry; fiction and drama produced in the first half of the twentieth century in England; Ireland; and America; with selected texts in translation when appropriate.

Credits	4
Degree Attributes	CoB: Humanities

ENGL 450: Independent Study

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.

Credits	1-4
Prerequisites	ENGL 102

ENGL 451: Publishing Practicum

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.

Credits	4
Prerequisites	ENGL 102

ENGL 459: Literary Criticism and Theory

This course examines how literature has been approached and understood from the time of Plato to the present day. Readings are selected from those critical and theoretical statements which have most profoundly influenced literary response and even literature itself.

Credits	2-4
Degree Attributes	CoB: Humanities

ENGL 460: Major Figures in Literature

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).

Credits	2-4
Degree Attributes	CoB: Humanities
Prerequisites	ENGL 328 or 1 of ENGL 200-206

ENGL 461: Special Topics Seminar-Literature

A series of courses; each being an advanced study of a subject not covered in detail by other 400-level courses.

Credits	1-4
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ENGL 472: Dramatis Personae

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.

Credits	4
Degree Attributes	CoB: Humanities
Prerequisites	
ENGL 328 or 1 of ENGL 200-206	

ENGL 474: Writing the Short Story

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.)

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities-'Other'
Prerequisites	
ENGL 328 or 1 of ENGL 200-206	

ENGL 475: Writing Formal Poetry

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.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities-'Other'
Prerequisites	
ENGL 328 or 1 of ENGL 200-206	

ENGL 476: Writing the Long Poem or Poetic Sequence

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.

Credits	4
Degree Attributes	CoB: Humanities
Prerequisites	
ENGL 328 or 1 of ENGL 200-206	

ENGL 481: International Women Writers

In this course we explore literature written by contemporary women from different cultures. Study focuses on voice; content; and style; with some attention to the conditions in which the work was produced and to its reception.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Humanities
Prerequisites	
ENGL 325/326 or ENGL 327	
Crosslisted	
WGST 481	

ENGL 485: Internship in English

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.

Credits	1-4
Prerequisites	
ENGL 102	

ENGL 496: English Honors Thesis

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](#).

Credits	2
Prerequisites	
ENGL 102	

ENGR 100: Special Topics

Credits	1-3
Corequisites	
ENGR 100L	

ENGR 100L: Special Topics Lab

Credits	0
Corequisites	
ENGR 100	

ENGR 101: Introduction to Engineering

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.

Credits	2
Corequisites	
ENGR 102A	

ENGR 102: Computer Aided Design

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.

Credits	2
Corequisites	
ENGR 102A	

ENGR 104: Computer Aided Engineering

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.

Credits	2
Corequisites	
ENGR 104A	

ENGR 107: Machine Shop Training

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.

Credits	1
Corequisites	
ENGR 107L	

ENGR 107L: Machine Shop-Trng. Lab

This is a hands-on laboratory course which covers machining practices and topics such as shop safety; precision measurement; blue print reading; and Geometric Dimensioning and Tolerance.

Credits	0
Corequisites	
ENGR 107	

ENGR 110: Technical Communications

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.

Credits	4
Prerequisites	
ENGL 101 or equivalent	

ENGR 111: Explorations in Biomaterials

An Engineering Exploration course focusing on biomaterials. This hands-on laboratory course covers data collection; analysis and reporting. First-year engineering students enroll in two different Engineering Exploration courses.

Credits	1
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ENGR 112: Explorations in Ceramic Engineering

An Engineering Exploration course focusing on ceramic engineering. This hands-on laboratory course covers data collection; analysis and reporting. First-year engineering students enroll in two different Engineering Exploration courses.

Credits	1
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ENGR 113: Explorations in Renewable Energy Engineering

An Engineering Exploration course focusing on renewable energy. This hands-on laboratory course includes solar; wind; fuel cell and sustainable design. First-year engineering students enroll in two different Engineering Exploration courses.

Credits	1
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ENGR 114: Explorations in Glass Engineering

An Engineering Exploration course focusing on glass science and engineering. This hands-on laboratory course covers data collection; analysis and reporting. First-year engineering students enroll in two different Engineering Exploration courses.

Credits	1
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ENGR 115: Explorations in Materials Science and Engineering

An Engineering Exploration course focusing on materials science and engineering. This hands-on laboratory course covers data collection; analysis and reporting. First-year engineering students enroll in two different Engineering Exploration courses.

Credits	1
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ENGR 116: Explorations in Mechanical Engineering

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.

Credits	1
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Corequisites	
ENGR 116L	

ENGR 116L: Lab-Explorations in ME

Credits	0
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Corequisites	
ENGR 116	

ENGR 117: Engineering Foundations

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.

Credits	2
Corequisites	
	ENGR 117L

ENGR 117L: Lab-Engineering Foundations II

Credits	0
Corequisites	
	ENGR 117

ENGR 125: Precision Agriculture

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.

Credits	2
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ENGR 160: First-Year Seminar

A series of lectures each semester for first year engineering students on topics of importance to engineers. Attendance mandatory.

Credits	0
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ENGR 200: Special Topics

Credits	2-4
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ENGR 204

ENGR 206: Engineering Economy

The analysis and evaluation of alternative uses of capital in engineering and business projects. Financial decision-making for engineering and management alternatives involving investment; operating cost and time value of money. Prerequisite: [MATH 152](#).

Credits	3
Degree Attributes	CoB: Social Science

ENGR 210: Discovery and Disaster

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.

Credits	2
Degree Attributes	CoB: Humanities SoE: Other Humanities/Soc Sci

ENGR 220: Circuit Theory I

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](#).

Credits	4
Prerequisites	
	PHYS126; pre-or-coreq: MATH271
Corequisites	
	ENGR 220L

ENGR 220L: Laboratory-Circuit Theory I

Credits	0
Corequisites	
ENGR 220	

ENGR 300: Special Topics in Engineering

Credits	1-4
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ENGR 301: Engineering Leadership: Principles and Practice for E-LEAD

As a required course for students in the E-LEAD (Engineering Leadership Education and Development) program; this course explores the nature; theory; and practice of leadership. Permission of the instructor is required for registration.

Credits	1
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ENGR 305: Engineering Statistics

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.

Credits	3
Degree Attributes	CoB: Quant Reasoning
Prerequisites	
MATH 152	

ENGR 306: Engineering Economics

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.

Credits	2
Prerequisites	
MATH 152	

ENGR 330: Renewable Energy in Power Grid Systems

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.

Credits	2
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ENGR 360: Undergraduate Seminar

A series of lectures each semester for sophomore; junior; and senior engineering students on topics of importance to engineers. Attendance mandatory.

Credits	0
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ENGR 370: Engineering Leadership Project

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

Credits	1
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ENGR 385: Internship

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.

Credits	1-3
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ENGR 388: Applied Complex Variables

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.

Credits	3
Prerequisites	
	MATH 271

ENGR 395: Engineering Design

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.

Credits	2
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ENGR 400: Special Topics in Engineering

Special topics in engineering are offered. Topics vary from year to year.

Credits	2-4
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ENGR 408: Statistics for Manufacturing

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.

Credits	3
Prerequisites	
	Senor standing and one of the ENGR 305/202 or BUSI 113 or Math 381

ENGR 450: Independent Study

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.

Credits	1-4
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ENGR 471: Genetic Algorithms

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.

Credits	3
Crosslisted	
	ELEC 571

ENGR 472: Machine Learning Applications in Battery Life Predictions

Fundamentals of battery chemistry and the degradation mechanisms; battery degradation data acquisition in lab; essential data science skills for analyzing battery data and application of machine learning modeling in the prediction of battery degradation.

Credits	1
Corequisites	
	ENGR 472L

ENGR 472L: Machine Learning Applications in Battery Life Predictions Lab

Fundamentals of battery chemistry and the degradation mechanisms; battery degradation data acquisition in lab; essential data science skills for analyzing battery data and application of machine learning modeling in the prediction of battery degradation.

Credits	0
Corequisites	
	ENGR 472

ENGR 480: Senior Capstone Individual Project

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.

Credits	2
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ENGR 484: Optimization Methods in Engineering

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.

Credits	3
Prerequisites	ENGR 104 , MATH 271

ENGR 486: Engineering Operations

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.

Credits	4
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ENGR 490: Senior Capstone Group Project

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.

Credits	2
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ENVS 100: Special Topics

Consideration of environmental issues and topics introduced in 100-level courses. Topics vary from term to term.

Credits	1-4
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ENVS 101: Environmental Studies I - Natural Science

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.

Credits	4
Degree Attributes	CLAS: (F-III) Science/Society CLAS: (F2) Nat Sci-no Lab AU: Global Perspective CoB: Natural Science

ENVS 106: The Water Planet

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.

Credits	4
Degree Attributes	CLAS: (F-III) Science/Society CoB: Natural Science

ENVS 200: Special Topics

Further consideration of environmental issues and topics introduced in 200-level courses. Topics vary from term to term.

Credits	1-4
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ENVS 203: Climate Change and Society

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.

Credits	4
Degree Attributes	CLAS: (F-III) Science/Society

ENVS 205: Environmental Data Analysis

Basic techniques and tools for manipulation of quantitative data; emphasizing environmental studies; data collection; analysis on spreadsheets and statistical packages; graphical presentation.

Credits	4
Degree Attributes	CLAS: (03) Quant Reasoning CoB: Quant Reasoning
Prerequisites	ENVS 101

ENVS 206: Fieldcraft-Outdoor Proficiency

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.

Credits	4
Prerequisites	One GEOL or ENVS course

ENVS 212: Introduction to Remote Sensing

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.

Credits	4
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ENVS 214: Environment Politics and Society

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.

Credits	4
Degree Attributes	CoB: Social Science
Crosslisted	POLS 214 ; SOCI 214

ENVS 220: Introduction to Geographic Information Systems

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.

Credits	4
Degree Attributes	CoB: Social Science

ENVS 240: Environmental Research Procedures I

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.

Credits	3
Degree Attributes	CoB: Natural Science

ENVS 241: Environmental Research Procedures II

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.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
ENVS 240	

ENVS 300: Special Topics

Further considerations of environmental issues introduced in 100 and 200-level courses.

Credits	1-4
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ENVS 301: Contemporary Topics in Geospatial Technology

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.

Credits	2
Prerequisites	
ENVS 220 or 212	

ENVS 302: Mobile and Web-based GIS

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.

Credits	4
Prerequisites	
ENVS/CSCI 220	

ENVS 310: Ecology of the Bahamas

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.

Credits	3
Degree Attributes	AU: Global Perspective CoB: Natural Science AU: Travel Courses
Prerequisites	
ENVS 101 or BIOL 150	

ENVS 315: Herpetology

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.

Credits	3
Prerequisites	
ENVS 101 or BIOL 150	

ENVS 320: Advanced GIS Applications

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
ENVS/CSCI 220	

ENVS 330: Ornithology

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.

Credits	4
Prerequisites	
ENVS 101 or BIOL 150	

ENVS 351: Environmental Biogeochemistry

Transformation and movement of elements on Earth; with emphasis on effects of humans and potential global change. Projects involve field and instrumental analyses.

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	
CHEM 105 , ENVS 101	

ENVS 357: Conservation Biology

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.

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	
BIOL 150 or ENVS 101	

ENVS 360: Junior Seminar

Students in this course attend weekly seminars on pertinent topics related to Environmental Studies. Required of all Environmental Studies majors.

Credits	1
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ENVS 400: Special Topics

Further considerations of environmental issues introduced in lower level courses.

Credits	1-4
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ENVS 415: Natural Resources Management

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.

Credits	3
Degree Attributes	CoB: Natural Science

ENVS 440: Environmental Research Planning

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.

Credits	2
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ENVS 450: Independent Study

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.

Credits	1-4
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ENVS 485: Internship in Environmental Studies

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.

Credits	1-4
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ENVS 490: Senior Seminar

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.

Credits	2
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ENVS 499: Senior Project in Environmental Studies

Independent research under an instructor's supervision. Presentation of project is required for graduation.

Credits	2-4
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EQUUS 100: Special Topics

Offerings in riding or other equestrian physical activity which vary year to year.

Credits	2-4
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)

EQUUS 101: Introduction to Riding Level I

This course is designed for non-majors interested in learning to ride a horse. Subjects covered include equine safety; basic grooming and husbandry skills; mounting/dismounting procedures; and the basics of walking and trotting on horseback independently. (Every Term)

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)

EQUUS 102: Introduction to Riding: Level II

This course is designed for non-majors interested in learning to ride a horse. Subjects covered include equine safety; horse care; arena etiquette; and further development of gaits such as walking; trotting; and cantering. (Every Term)

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)
Prerequisites	
EQUUS 101	
Semester Offered	Every Term

EQUUS 103: English Riding: Level III

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. 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.

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)
Prerequisites	
EQUUS 102	

EQUUS 104: English Riding: Level IV

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. 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.

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)
Prerequisites	
EQUUS 103	

EQUUS 105: Introduction to Dressage

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. 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.

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)
Prerequisites	
EQUUS 102	

EQUUS 110: Fundamentals of English Equitation

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.

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)

EQUUS 111: Development of the English Rid

This course is designed for students enrolled in an equestrian major who seek to develop their skills as English equestrian athlete. Topics include equine safety; proper grooming techniques; and essential horse care practices. Students will learn the fundamentals of independent riding at the walk; trot; and canter; focusing on transitions; adjustability; and ring figures. The course also introduces basic over-fences work. (Every term)

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)
Prerequisites	
EQUUS 110	
Semester Offered	Every Term

EQUUS 112: Western Riding: Level III

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.

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)
Prerequisites	
	EQUUS 111

EQUUS 113: Western Riding: Level IV

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. 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.

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)
Prerequisites	
	EQUUS 112

EQUUS 115: Dressage II

Credits	2
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EQUUS 118: Advanced Horsemanship

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: lope circles; lead changes; spins; run downs; sliding stops; and roll backs. 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.

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)
Prerequisites	
	EQUUS 112

EQUUS 120: Fundamentals of Western Horsemanship

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; lunging; 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.

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)

EQUUS 121: Development of the Western Rider

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; lunging; 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.

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)
Prerequisites	
EQUUS 120	

EQUUS 122: Driving III

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: [EQUUS 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.

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)
Prerequisites	
EQUUS 121	

EQUUS 125: Competition Show Jumping

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.

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19)
Prerequisites	
EQUUS 103	

EQUUS 130: Fundamentals of Driving

Open to all students regardless of equine experience. Students learn safe ground handling practices and basic equine care as well as harnessing; hitching and driving single equines. Other topics include safely starting an equine 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.

Credits	2
Degree Attributes	AU: Phys Fitness (Fall '19+)

EQUUS 131: Pleasure Driving

Students continue to learn safe ground handling practices around single and pair equine driving; including harnessing; line driving; hitching and driving implements. Additional topics include care and management of equines and showing of the driving equine. 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.

Credits	2
Degree Attributes	AU: Phys Fitness (Fall '19+)
Prerequisites	
EQUUS 130	

EQUUS 200: Special Topics

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.

Credits	1-4
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EQUUS 201: The Art and Theory of Equitation

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.

Credits	4
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Prerequisites
EQUUS 105 or EQUUS 113

EQUUS 202: Advanced Reining

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.

Credits	2
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Degree Attributes	AU: Phys Fitness (Fall '19+)
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EQUUS 203

Credits	4
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EQUUS 205: Introduction to Equine Science

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.

Credits	4
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EQUUS 210: Intermediate English Riding I

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: [EQUUS 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.

Credits	2
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Degree Attributes	AU: Phys Fitness (Fall '19+)
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Prerequisites
EQUUS 111

EQUUS 211: Methods of Teaching Western Riding

This course is designed for equestrian majors looking to advance their skills as English equestrian athletes. Topics include advanced grooming techniques such as clipping and show braiding; along with essential horse care practices. Students are expected to have a solid foundation in riding at the walk; trot; and canter and should be confident in executing an intermediate level jumping course of 18 inches or higher. (All Terms)

Credits	2
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Degree Attributes	AU: Phys Fitness (Fall '19+)
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Prerequisites
EQUUS 210

Semester Offered	Every Term
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EQUUS 215: Equine Business Management

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.

Credits	4
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EQUUS 216: Horse Show Management

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.

Credits	4
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EQUUS 218: Judging Horse Shows

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.

Credits	4
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EQUUS 220: Intermediate Western Horsemanship I

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: [EQUUS 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.

Credits	2
Degree Attributes	AU: Phys Fitness (Fall '19+)
Prerequisites	
EQUUS 121	

EQUUS 221: Intermediate West. Riding II

This course is designed for students that are in an equestrian major who are interested in learning more about using their aides and creating a better connection to their horse. Subjects covered include basic horsemanship position; better understanding your horse movements; bending; and the basics of collection. 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. (Every term)

Credits	2
Degree Attributes	AU: Phys Fitness (Fall '19+)
Prerequisites	
EQUUS 220	
Semester Offered	Every Term

EQUUS 223: Hunter and Jumping Course Design

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.

Credits	2
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EQUUS 225: Equine Nutrition

This course examines digestive physiology; involving carbohydrates; proteins; fats; minerals and vitamins. Also; a practical approach to proper feedstuffs and use of quality feedstuffs to maintain health and productivity of horses. 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.

Credits	2
Degree Attributes	CoB: Natural Science

EQUUS 226: Caring for the Equine Anatomy

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.

Credits	2
Degree Attributes	CoB: Natural Science

EQUUS 228: The Equine Industry in Ireland

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.

Credits	2
Degree Attributes	AU: Global Perspective AU: Travel Courses

EQUUS 230: Fundamentals of Equine Husbandry

This course is foundational in giving any student a basis of knowledge in how to handle and manage horses from an internal and external perspective. This is crucial for all students in all equestrian degree and minor programs. Offered every term.

Credits	2
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EQUUS 231: History of the Horse

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. Offered in the Summer term

Credits	4
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EQUUS 233: Hunter and Jumper Course Design

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.

Credits	2
Prerequisites	
EQUUS 211	

EQUUS 234: Horse Show Judging

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.

Credits	4
Prerequisites	
EQUUS 111 or 121	

EQUUS 300: Special Topics

Credits	1-4
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EQUUS 310: Advanced Hunter Seat Riding I

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. 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.

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)
Prerequisites	
EQUUS 211	

EQUUS 311: Advanced Hunter Seat Riding II

This course is designed for equestrian majors looking to advance their skills as English equestrian athletes. Topics include advanced grooming techniques such as mane pulling; along with essential horse care practices. Students are expected to have a solid foundation in riding at the walk; trot; and canter and should be confident in executing an advanced level jumping course of 2'3 or higher.

Credits	2
Degree Attributes	AU: Phys Fitness (Fall '19+)
Prerequisites	
EQUUS 310	
Semester Offered	Every Term

EQUUS 312: Introduction to Dressage

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. 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.

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)
Prerequisites	EQUUS 211

EQUUS 313: Intermediate Dressage

This course is designed for the rider who wants to become more proficient in understanding the discipline of Dressage. It will provide practical experience in learning basic skills necessary for riding successful first level dressage tests. Lecture topics will include knowledge and observation of; the fundamentals of the training pyramid; conditioning/ training of the horse needed to compete in dressage; health and safety issues related to dressage. Lab skills will include improving riders balance; position; effectiveness of aids and training horses to better develop improved gaits through development of better balance; strength and suppleness. (Every term)

Credits	2
Degree Attributes	AU: Phys Fitness (Fall '19+)
Prerequisites	EQUUS 312
Semester Offered	Every Term

EQUUS 320: Advanced Western Horsemanship

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.

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)
Prerequisites	EQUUS 221

EQUUS 321: Introduction to Ranch Riding

Designed for the advanced rider who wants to become proficient in riding ranch riding patterns. Lecture topics include general knowledge and observation of ranch riding patterns; condition of the horse needed to compete in ranch riding; health; safety issues; and the shoeing needs of ranch riding horses. Lab skills include walking; trotting; extended trotting; loping; extended loping; ground pole work; side-passing; turnarounds; and rollbacks. 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.

Credits	2
Degree Attributes	AU: Phys Fitness (Fall '19+)
Prerequisites	EQUUS 320

EQUUS 330: Advanced Equine Husbandry

This course explores the internal and external factors of the horse’s anatomy and physiology in a function focus. Students will learn about each of the major biological systems within the equines; diseases that can affect them; and how to manage those illnesses. Injury and advanced first aid will be covered as well. Student will also learn advanced handling techniques such as lunging the horse; applying restraints; trailer loading; etc. (Fall)

Credits	4
Prerequisites	
EQUUS 230	
Semester Offered	Fall

EQUUS 331: Equine Behavior

This course is designed for the student who wants to develop a better understanding of the human horse relationship. Subjects will focus on developing an understanding of the natural behaviors; communication methods and learning patterns of horses. This course is both lecture and lab based; utilizing diverse spaces at the Equestrian Center; including the stables; arenas; and grass fields. (Fall)

Credits	4
Prerequisites	
EQUUS 230	
Semester Offered	Fall

EQUUS 332: Equine Production

This course examines an overview of equine nutrition and equine reproduction to give students exposure to this topic for continued study. Topics covered include: digestive physiology; a practical approach to proper equine nutrition; examining various feeds and hay for horses; reproductive physiology of the stallion and mare; the equine breeding industry; and foal management. 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 (Spring)

Credits	4
Semester Offered	Spring

EQUUS 333: Fitting the Show Horse

This course is designed to expose students to fitting a horse for showing in English and Western performance events. Students will also learn about grooming techniques specific for the showing industry such as clipping the horse; braiding and banding manes; and related topics. Also covered will be presenting the show horse in hand specific to Western (halter) and English disciplines. (Spring)

Credits	2
Prerequisites	
EQUUS 230 , EQUUS 111 or 121	
Semester Offered	Spring

EQUUS 410: Show Hunters

This course is designed for equestrian majors looking to advance their skills as Hunter Riders. Topics include advanced grooming techniques at an “A” rated standard such as mane pulling; hunter braiding; and show clipping. Students are expected to be proficient in riding at the walk; trot; canter; counter canter and should be confident in executing an advanced level hunter style course of 2’6 or higher. (Every term)

Credits	2
Degree Attributes	AU: Phys Fitness (Fall '19+)
Prerequisites	
EQUUS 311	
Semester Offered	Every Term

EQUUS 411: Competition Show Jumping

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.

Credits	2
Degree Attributes	AU: Phys Ed (pre Fall '19)
Prerequisites	
EQUUS 311	

EQUUS 412: Advanced Dressage I

This course is designed for the rider who has a strong foundation in Dressage and wants to advance in their Dressage training. It will provide practical experience in learning advanced skills necessary for riding successful upper-level dressage tests. Lecture topics will include knowledge and observation of; the fundamentals of the training pyramid; conditioning/training of the horse needed to compete in upper-level dressage; health and safety issues related to dressage. Lab skills will include improving riders balance; position; seat; effectiveness of aids and training horses to further develop improved gaits through development of better straightness and impulsion; while introducing more collected movements. (Every term).

Credits	2
Degree Attributes	AU: Phys Fitness (Fall '19+)
Prerequisites	
EQUUS 313	
Semester Offered	Every Term

EQUUS 413: Advanced Dressage II

This course is designed for the rider who wants to become more proficient in advanced Dressage. It will provide practical experience in learning skills necessary for riding successful advanced level dressage movements and tests. Topics will include knowledge and observation of the training pyramid; conditioning/training of the horse needed to compete in upper-level dressage; health and safety issues related to dressage. Lab skills will include improving riders balance; position; seat; effectiveness of aids and ability to train horses to perform increased engagement in their movement as well as more refined transitions between gaits. (Every term)

Credits	2
Degree Attributes	AU: Phys Fitness (Fall '19+)
Prerequisites	
EQUUS 412	
Semester Offered	Every Term

EQUUS 420: Introduction to Reining

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: [EQUUS 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.

Credits	2
Prerequisites	
EQUUS 320 , EQUUS 321	

EQUUS 421: Advanced Reining

Credits	2
Prerequisites	
EQUUS 420	

EQUUS 422: Intermediate Ranch Riding

This course offers a further development of the theories and methods of ranch riding. Students will learn more advanced training techniques to begin to develop better maneuvers demonstrated in the show arena. Lab skills include walking; trotting; extended trotting; loping; extended loping; ground pole work; side-passing; turnarounds; and rollbacks. 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. (Every term)

Credits	2
Degree Attributes	AU: Phys Fitness (Fall '19+)
Prerequisites	
EQUUS 321	
Semester Offered	Every Term

EQUUS 423: Advanced Ranch Riding

This course exposes students to advanced arena work relevant to the showing of Ranch Riding. Students will be exposed to judging methods for this course that will help them in learning to improve their scores while performing in their show area. Lab skills include walking; trotting; extended trotting; lope; extended lope; ground pole work; side-passing; turnarounds; and rollbacks. 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. (Every term)

Credits	2
Degree Attributes	AU: Phys Fitness (Fall '19+)
Prerequisites	
	EQUUS 422
Semester Offered	Every Term

EQUUS 450: Independent Study

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.

Credits	1-4
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ESL 101: English Skills for Multilingual Students

This course focuses on building skills in listening; speaking; grammar and writing for students whose first language is not English.

Credits	4
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ESL 102: Reading and Vocabulary Development for Multilingual Students

This course focuses on developing English language reading skills in four crucial areas: extensive reading; vocabulary development; comprehension; and reading fluency. Students will gain practice in each area; allowing them to tackle their academic reading load more effectively.

Credits	2
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ESL 400: Special Topics

Credits	1-4
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ESL 401: Speaking and Listening

This course will help non-native English speakers improve their speaking and listening skills. Students will work on pronunciation; oral presentation; and extracting meaning from conversations and other kinds of extended discourse.

Credits	2
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FIN 205: Student Managed Investment Fund

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.

Credits	1
Degree Attributes	CoB: Field Experience
Corequisites	
	FIN 206

FIN 206: Student Managed Investment Fund Laboratory

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.

Credits	1
Degree Attributes	CoB: Field Experience
Prerequisites	
	FIN 205 (formerly BUSI 205)

FIN 300: Topics in Finance

Topics not covered in other finance courses are presented.

Credits	1-3
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FIN 306: Student Managed Investment Fund Advanced Laboratory

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.

Credits	2
Prerequisites	
FIN 205 and FIN 206	

FIN 310: Introduction to Financial Planning

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.

Credits	3
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FIN 322: Finance Analytics

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.

Credits	3
Prerequisites	
BUSI 113 , DATA 201 , ECON 310 , FIN 348 , MIS 101	

FIN 343: Real Estate Financing and Investment

This course provides as introduction to real estate with a focus on investment and financing issues. Project evaluations, financing strategies, investment decision making and capital markets are covered. No prior knowledge of the industry is required, but students are expected to rapidly acquire a working knowledge of real estate markets. Classes are conducted in a standard lecture format with discussion required. The course contains cases that help students evaluate the impact of more complex financing and capital market tools used in real estate. Lecture with discussion required. This will include Time Value of Money, Pro Formas (in Excel), basic models, and discounted cash flow analysis.

Credits	3
Prerequisites	
FIN 348	

FIN 348: Managerial Finance

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.

Credits	3
Prerequisites	
ACCT 211/212 , ECON 201/202	

FIN 349: Business Financial Decisions

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? (Spring)

Credits	3
Prerequisites	
FIN 348	
Semester Offered	Spring

FIN 445: Managerial Economics

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.

Credits	3
Prerequisites	
FIN 348	
Crosslisted	
MBA 651	

FIN 450: Independent Study

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.

Credits	1-4
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FIN 454: Security Analysis

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.

Credits	3
Prerequisites	
FIN 348	
Crosslisted	
MBA 641	

FIN 455: Business Financial Decisions

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?

Credits	3
Prerequisites	
FIN 348	

FIN 458: International Financial Management

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.

Credits	3
Degree Attributes	AU: Global Perspective
Prerequisites	
FIN 348	

FIN 460: Seminar in Finance

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.

Credits	3
Prerequisites	
1 FIN Course 300 or higher	

FREN 101: French I

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.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities

FREN 102: French II

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.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities
Prerequisites	
FREN 101	

FREN 200: Special Topics

Content varies.

Credits	1-4
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FREN 201: Intermediate French III

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.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities
Prerequisites	
FREN 102	

FREN 202: Intermediate French IV

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.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities
Prerequisites	
FREN 201	

FREN 208: Francophone Queer Voices

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.

Credits	4
Degree Attributes	CLAS: (A) Literature AU: Global Perspective

FREN 210: Global Perspectives: Paris

This course enables students to develop an understanding and appreciation of another culture; first in the classroom; and then two weeks in Paris. The focus is on history; art; and contemporary culture. Open to all students.

Credits	2
Degree Attributes	AU: Global Perspective CoB: Humanities AU: Travel Courses
Crosslisted	
	ARTH 210 , GLBS 210

FREN 300: Special Topics

Credits	1-4
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FREN 301: Advanced French Conversation

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.

Credits	4
Degree Attributes	CoB: Humanities
Prerequisites	
	FREN 202

FREN 302: Advanced French Grammar and Composition I

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. (Alternate years)

Credits	4
Degree Attributes	CoB: Humanities
Prerequisites	
	FREN 202
Semester Offered	Alternate Years

FREN 305: French Pronunciation and Phonetics

This course focuses on oral proficiency and listening comprehension; as well as French phonetics. Students gain a better understanding of the phonetic structure of French and improve all aspects of their pronunciation; including intonation; phrasing; syllable structure and stylistic interpretation.

Credits	2
Prerequisites	
	FREN 201

FREN 310: Reading French Texts

Intensive vocabulary building; writing; reading and discussion of texts in French. Designed to prepare students for other upper-level French courses. .

Credits	4
Degree Attributes	CoB: Humanities
Prerequisites	
	FREN 202

FREN 311: French Literature I

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.

Credits	4
Degree Attributes	CoB: Humanities
Prerequisites	
FREN 310	

FREN 312: French Literature II

Credits	4
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FREN 316: Contemporary French Culture

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. (Alternate years)

Credits	4
Degree Attributes	AU: Global Perspective CoB: Humanities
Prerequisites	
FREN 202	
Semester Offered	Alternate Years

FREN 400: Special Topics in French

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.

Credits	1-4
Prerequisites	
FREN 310	

FREN 420: The Art of French Translation

Intensive practice in translation from French to English; and from English to French. Current nonfiction; fiction; periodicals; and newspapers are materials for translation. The course is conducted in French.

Credits	4
Degree Attributes	CoB: Humanities
Prerequisites	
FREN 303	

FREN 450: Independent Study

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.

Credits	1-4
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FREN 485: Internship in French

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.

Credits	1-4
Degree Attributes	AU: Global Perspective

FREN 490: Modern Languages Senior Seminar

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.

Credits	0
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GEOL 101: This Dynamic Earth

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.

Credits	4
Degree Attributes	CLAS: (F-I) Scientific Inquiry CLAS: (F1) Nat Sci w/Lab CoB: Natural Science
Corequisites	
	GEOL 101L

GEOL 101L: Laboratory-This Dynamic Earth

Credits	0
Corequisites	
	GEOL 101

GEOL 103: Hazards Disasters and Catastrophes

An introduction to the physical processes underlying natural hazards; disasters; and catastrophes. The course emphasizes understanding hazard prediction; risk assessment; and the impact of geological phenomena on human societies. Topics include volcanoes; earthquakes; tsunamis; severe weather; flooding; meteorite impacts and more.

Credits	4
Degree Attributes	CLAS: (F-II) Scientific Knowldg CLAS: (F2) Nat Sci-no Lab CoB: Natural Science
Corequisites	
	GEOL 103L

GEOL 103L: Lab-Hazards Disasters and Catastrophes

This lab is the corequisite with [GEOL 103](#).

Credits	0
Corequisites	
	GEOL 103

GEOL 104: Earth and Life through Time

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.

Credits	4
Degree Attributes	CLAS: (F-I) Scientific Inquiry CLAS: (F1) Nat Sci w/Lab CoB: Natural Science
Corequisites	
	GEOL 104L

GEOL 104L: Laboratory-Earth/Life/Time

Credits	0
Corequisites	
	GEOL 104

GEOL 106: Elementary Oceanography

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.

Credits	4
Degree Attributes	CLAS: (F-II) Scientific Knowldg CLAS: (F2) Nat Sci-no Lab CoB: Natural Science

GEOL 200: Special Topics in Geology

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)

Credits	1-4
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GEOL 201: Surficial Geology

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.

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	
1 of: GEOL 101 , 104, ENVS 101	
Corequisites	
GEOL 201L	

GEOL 201L: Laboratory-Surficial Geology

Credits	0
Corequisites	
GEOL 201	

GEOL 206: Fieldcraft-Outdoor Proficiency

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.

Credits	4
Prerequisites	
One GEOL or ENVS course	

GEOL 231: Climate Change Mechanics

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. (Alternating Fall)

Credits	4
Prerequisites	
One GEOL or ENVE 100 level crs	
Semester Offered	Alternating Fall

GEOL 301: Structural Geology

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.

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	
Any GEOL course	

GEOL 302: Mineralogy and Petrology

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.

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	
GEOL 100-level	
Corequisites	
GEOL 302L	

GEOL 302L: Laboratory-Mineral/Petrol

Credits	0
Corequisites	
GEOL 302	

GEOL 307: Stratigraphy and Sedimentation

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.

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	
Any GEOL course	

GEOL 400: Special Topics in Geology

A discussion of topics appropriate to current geological phenomena; including such topics as environmental geochemistry or economic geology. (Sufficient demand)

Credits	1-4
Semester Offered	Sufficient demand

GEOL 408: Tectonics

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)

Credits	4
Degree Attributes	CoB: Natural Science
Semester Offered	Alternate Years

GEOL 450: Independent Study

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.

Credits	1-4
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GEOL 464: Hydrogeology

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.

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	
GEOL 201	
Corequisites	
GEOL 464L	

GEOL 464L: Laboratory-Hydrogeology

Credits	0
Corequisites	
GEOL 464	

GERO 118: Introduction to Adult Development and Aging

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.

Credits	4
Degree Attributes	CLAS: (E1) Social Sci-Psyc CoB: Social Science
Crosslisted	
PSYC 118 ; SJST 118	

GERO 300: Special Topics in Gerontology

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.

Credits	2-4
Prerequisites	
	PSYC 101

GERO 429: Cognition and Aging

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. Recommended: [PSYC 332](#) or [GERO 118](#) or permission of instructor. (Alternate years)

Credits	2
Degree Attributes	CoB: Social Science
Prerequisites	
	PSYC 101
Semester Offered	Alternate Years

GERO 450: Independent Study

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.

Credits	1-4
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GERO 485: Gerontology Internship

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. Prerequisites: Senior Gerontology major and permission of instructor.

Credits	4
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GLBS 100: Topics in Global Studies

Topics not covered in other Global Studies courses are presented.

Credits	1-4
Degree Attributes	AU: Global Perspective CoB: Humanities

GLBS 101: Introduction to Global Studies

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.

Credits	4
Degree Attributes	CLAS: (E3) Soc Sci-Soc/Anth AU: Global Perspective CoB: Social Science SoAD: Humanities-'Other'

GLBS 200: Special Topics

An open course; varying in content from year to year; which allows for concentration in specialized areas. (Sufficient demand)

Credits	1-4
Semester Offered	Sufficient demand

GLBS 208: Francophone Queer Voices

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.

Credits	4
Degree Attributes	CLAS: (A) Literature AU: Global Perspective

GLBS 210: Global Perspectives: Paris

This course enables students to develop an understanding and appreciation of another culture; first in the classroom; and then two weeks in Paris. The focus is on history; art; and contemporary culture. Open to all students.

Credits	2
Degree Attributes	AU: Global Perspective CoB: Humanities AU: Travel Courses
Crosslisted	
ARTH 210 , FREN 210	

GLBS 213: Speaking the Unspeakable: Argentina's Literature of Dictatorship

This course introduces literary representations of state violence and resistance during the Argentine military dictatorship of the 1970s and 1980s. We engage in close readings of a variety of literary genres; including novels; short stories; autobiography; and testimonial literature. We combine literary readings with study of historical and theoretical texts in order to deepen our understanding of state terrorism; resistance; trauma; memory; and justice. The course is conducted in English; including the readings and films.

Credits	4
Degree Attributes	CLAS: (A) Literature AU: Global Perspective CoB: Social Science
Crosslisted	
SJST 213 , SPAN 213	

GLBS 215: Framing Gender: Latin American Film

This course introduces students to Latin American film from the 1940's to the present. Students analyze filmic representations of gender; race; sexuality; and socio-economic class in historical context; exploring relationships among art; politics and culture. Students develop an understanding of film-making practices and acquire and apply critical skills and theoretical approaches to thinking; speaking; and writing about films.

Credits	4
Degree Attributes	CLAS: (C) The Arts AU: Global Perspective
Crosslisted	
SPAN 215 ; WGST 215	

GLBS 216: Cuba Close Up: Film since the Revolution

Cuban cinema was transformed by the Revolution; which elevated the importance of film in Cuba and contributed to its political nature. Students analyze filmic representations of gender; race; and socioeconomic class in their historical contexts; exploring the relationship among art; politics; and culture. Students develop critical skills for viewing and interpreting films and for speaking and writing about films and film genres.

Credits	4
Degree Attributes	CLAS: (C) The Arts AU: Global Perspective
Crosslisted	
SPAN 216 ; WGST 216	

GLBS 221: Pop Culture Goes Global

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. (Fall)

Credits	4
Degree Attributes	AU: Global Perspective CoB: Social Science
Crosslisted	
	COMM 221
Semester Offered	Fall

GLBS 271: World Politics

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.

Credits	4
Degree Attributes	CLAS: (E2) Soc Sci-Pols/Econ AU: Global Perspective CoB: Social Science SoAD: Humanities-'Other'

GLBS 300: Special Topics

An open course; varying in content from year to year; which allows for concentration in specialized areas. (Sufficient demand)

Credits	1-4
Semester Offered	Sufficient demand

GLBS 306: Arts of Japan

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.

Credits	4
Crosslisted	
	ARTH 306

GLBS 307: East Asian Design and Material Culture

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. (Fall; odd years)

Credits	4
Crosslisted	
	ARTH 307
Semester Offered	Fall Odd Years

GLBS 315: Understanding Global Media and Cultural Change

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. (Alternating Spring)

Credits	4
Degree Attributes	AU: Global Perspective CoB: Social Science
Crosslisted	
	COMM 315ng
Semester Offered	Alternating Spring

GLBS 325: Global Communication

lobal 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.

Credits	4
Degree Attributes	AU: Global Perspective
Prerequisites	
COMM 110	

GLBS 351: European Politics

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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Social Science
Crosslisted	
POLS 351	

GLBS 400: Special Topics

An open course; varying in content from year to year; which allows for concentration in specialized areas. (Sufficient demand)

Credits	1-4
Semester Offered	Sufficient demand

GLBS 450: Independent Study

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.

Credits	1-4
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GLBS 466: Histories of Photography in the Non-Western World

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.

Credits	4
Degree Attributes	AU: Global Perspective
Crosslisted	
ARTH 466	

GLBS 485: Internship in Global Studies

Internships with an international focus may receive Global Studies credit. Please contact the Director of Global Studies for more information.

Credits	1-4
Degree Attributes	AU: Global Perspective

GLBS 495: Global Issues Seminar

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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Social Science
Prerequisites	
GLBS 101	

GNED 101: Transfer BC-Foreign Lang I

Credits	3-4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities

GNED 102: Transfer BC-Foreign Lang II

Credits	3-4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities

GNED 103: Transfer BC-Quant Reasoning

Credits	3-4
Degree Attributes	CLAS: (03) Quant Reasoning CoB: Quant Reasoning

GNED 104: Transfer Area A-Literature

Credits	3-4
Degree Attributes	CLAS: (A) Literature CoB: Humanities

GNED 105: Transfer Area B-Phil/Relig

Credits	3-4
Degree Attributes	CLAS: (B) Philos/Relig Studies CoB: Humanities SoAD: Humanities

GNED 106: Transfer Area C-The Arts

Credits	2-4
Degree Attributes	CLAS: (C) The Arts

GNED 107: Transfer Area D-Historical Std

Credits	3-4
Degree Attributes	CLAS: (D) Historical Studies CoB: Humanities SoAD: Humanities

GNED 108: Transfer Area E1-SS Psych

Credits	3-4
Degree Attributes	CLAS: (E1) Social Sci-Psyc CoB: Social Science

GNED 109: Transfer Area E2-SS Pol Sci/Ec

Credits	3-4
Degree Attributes	CLAS: (E2) Soc Sci-Pols/Econ CoB: Social Science

GNED 110: Transfer Area E3-SS Soci/Anth

Credits	3-4
Degree Attributes	CLAS: (E3) Soc Sci-Soc/Anth CoB: Social Science

GNED 111: Transfer Area F1-Nat Sci w/Lab

Credits	3-4
Degree Attributes	CLAS: (F1) Nat Sci w/Lab CoB: Natural Science

GNED 112: Transfer Area F2-Nat Sc/No Lab

Credits	3-4
Degree Attributes	CLAS: (F-II) Scientifc Knowldg CLAS: (F2) Nat Sci-no Lab CoB: Natural Science

GREK 101: Koine Greek I

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 ω and $\mu\iota$ verbs; the relative pronoun; and the formation and translation of the present participle.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language

GREK 102: Koine Greek II

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.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language
Prerequisites	GREK 101

GREK 450: Koine Greek I

Credits	4
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GRMN 101: German I

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.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities

GRMN 102: German II

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: a score of 201-400 on German Language Placement Exam; or permission of instructor.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities
Prerequisites	GRMN 101

GRMN 200: Special Topics in German

This course will have varying topics each time the course is offered.

Credits	1-4
Degree Attributes	CoB: Humanities

GRMN 201: German III

Continuation and further development of basic skills learned in [GRMN 102](#). Includes introduction to short fiction and a review of grammar.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language
Prerequisites	GRMN 102

GRMN 202: German IV

Continuation of reading exercises and grammar review from [GRMN 201](#). Further development of listening and speaking skills.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language
Prerequisites	GRMN 201

GRMN 400: Special Topics

This course will have varying topics each time the course is offered.

Credits	1-4
Prerequisites	
	300-level GRMN course

GRMN 450: Independent Study

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.

Credits	1-4
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GRMN 485: Internship in German

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.

Credits	1-4
Degree Attributes	AU: Global Perspective

HFMT 200: Special Topics in HFMT

Topics of interest are offered. Topics vary term to term.

Credits	1-4
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HFMT 215: Personal Health and Wellness

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.

Credits	2
Degree Attributes	AU: Wellness (Fall '19)

HFMT 305: Field Experience in Health Fitness Management

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.

Credits	1
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HFMT 405: Program Design and Implementation in Health Fitness Management

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.

Credits	3
Prerequisites	ATHT 111 , ATHT 190 , BIOL 308
Corequisites	HFMT 405L

HFMT 405L: Lab-Prog Design/Implementation

Credits	0
Corequisites	HFMT 405

HFMT 410: Exercise Prescription

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.

Credits	4
Prerequisites	ATHT 111 , ATHT 392 , BIOL 308
Corequisites	HFMT 410L

HFMT 410L: Lab-Exercise Prescription

Credits	0
Corequisites	
HFMT 410	

HFMT 420: Special Populations and Health Appraisal

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.

Credits	2
Prerequisites	
BIOL 308 , ATHT 432	

HFMT 485: Internship

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](#).

Credits	2
Prerequisites	
HFMT 305	

HFMT 490: Senior Seminar

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.

Credits	1
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HFMT 495: Health Promotion Program Design

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.

Credits	2
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HIST 107: The World in the 20th Century

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.

Credits	4
Degree Attributes	CLAS: (D) Historical Studies AU: Global Perspective CoB: Humanities SoAD: Humanities

HIST 108: Soccer!: A Global History of Sport and Politics

This course follows the beautiful game from the nineteenth century to the present. We explore how soccer has changed; but also how soccer has impacted war and peace; colonialism and imperialism; authoritarianism and state terror; and questions of citizenship; race; gender; and inclusion.

Credits	4
Degree Attributes	CLAS: (D) Historical Studies AU: Global Perspective CoB: Humanities SoAD: Humanities

HIST 110: The Making of Europe

Credits	4
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HIST 111: Modern Western History

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.

Credits	4
Degree Attributes	CLAS: (D) Historical Studies AU: Global Perspective CoB: Humanities SoAD: Humanities

HIST 120: The Ancient Mediterranean

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.

Credits	4
Degree Attributes	CLAS: (D) Historical Studies CoB: Humanities BFA: non-American Hist SoAD: Humanities

HIST 121: Medieval Cultures

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.

Credits	4
Degree Attributes	CLAS: (D) Historical Studies CoB: Humanities BFA: non-American Hist SoAD: Humanities

HIST 130: Aztecs Incas and Conquistadors: Colonialism in the Americas

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. (Spring)

Credits	4
Degree Attributes	CLAS: (D) Historical Studies SoAD: Humanities

HIST 152: The Spectacular Spanish Empire: Rise Decline Influence

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.

Credits	4
Degree Attributes	CLAS: (D) Historical Studies CoB: Humanities SoAD: Humanities

HIST 153: Modern Latin American History

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.

Credits	4
Degree Attributes	CLAS: (D) Historical Studies AU: Global Perspective CoB: Humanities SoAD: Humanities

HIST 162: Modern East Asia: Japan China and Korea

This course covers the political; economic; and cultural developments in China; Japan; North and South Korea; Taiwan; and Mongolia from the mid-nineteenth century to the present. Peripheral and international history relating to these countries will also be discussed.

Credits	4
Degree Attributes	CLAS: (D) Historical Studies AU: Global Perspective SoAD: Humanities

HIST 200: Topics in History

A historical examination of issues in history. Topics will vary each time the course is offered. (Sufficient demand)

Credits	1-4
Degree Attributes	CoB: Humanities SoAD: Humanities

HIST 205: Information and Society

This course will give students a foothold in our rapidly shifting information landscape by introducing a framework for information literacy and exploring the role of information in society; covering topics like misinformation; artificial intelligence; paywalls; and personal data. Upon completing this course; students will be equipped with the knowledge; tools; and strategies necessary to exist as an informed and ethical person in the 21st century. (Bi Annually).

Credits	2
Crosslisted	LIBR 205/SJST 205
Semester Offered	Bi Annually

HIST 211: Early US History

American history from Jamestown to the Civil War with particular attention to the political; social; and economic development of the new nation.

Credits	4
Degree Attributes	CLAS: (D) Historical Studies CoB: Humanities SoAD: Humanities

HIST 212: Modern US History

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.

Credits	4
Degree Attributes	CLAS: (D) Historical Studies CoB: Humanities SoAD: Humanities

HIST 223: German History into the 21st Century

This course explores German history from the earliest evidence of the Germanic tribes through developments in the most recent decade in Germany.

Credits	4
Degree Attributes	CLAS: (D) Historical Studies AU: Global Perspective CoB: Humanities SoAD: Humanities

HIST 232: African Kingdoms-Egypt-Kongo

A survey of the origins of human civilization; African Kingdoms; and globalization of the continent up to 1800.

Credits	4
Degree Attributes	CLAS: (D) Historical Studies SoAD: Humanities

HIST 235: African American History Since 1863

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.

Credits	4
Degree Attributes	CLAS: (D) Historical Studies CoB: Humanities SoAD: Humanities

HIST 300: Topics in History/Non-American

Studies of different non-American historical themes; with topics varying each time the course is given.

Credits	1-4
Degree Attributes	CoB: Humanities SoAD: Humanities

HIST 301: America in War during the 20th Century

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)

Credits	4
Degree Attributes	AU: Global Perspective CoB: Humanities SoAD: Humanities
Semester Offered	Alternate Years

HIST 303: The Civil War Era: 1830-1877

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. (Alternate years)

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities

HIST 304: Historian's Craft: The Past

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.

Credits	2
Degree Attributes	SoAD: Humanities

HIST 305: Historian's Craft: The Future

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.

Credits	2
Degree Attributes	SoAD: Humanities

HIST 307: Post-World War II America

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.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities

Crosslisted
SJST 307

HIST 308: Americans and Their Environments

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.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities

HIST 309: Israelis Arabs and American Foreign Policy

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.

Credits	2
Degree Attributes	CoB: Humanities SoAD: Humanities

HIST 310: The Ancient Greeks

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)

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities
Semester Offered	Alternate Years

HIST 311: The Roman World

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)

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities
Semester Offered	Alternate Years

HIST 312: Early Medieval Europe 400-1050

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)

Credits	4
Degree Attributes	SoAD: Humanities
Semester Offered	Alternate Years

HIST 321: The History of Fascism

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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Humanities SoAD: Humanities
Crosslisted	
POLS 321	

HIST 322: Churchill Stalin Roosevelt Hitler

A biographical approach to the Great Depression and World War II period.

Credits	2
Degree Attributes	AU: Global Perspective CoB: Humanities SoAD: Humanities

HIST 324: Queer American History

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.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities

HIST 329: Revolution and Culture: Hegel Marx Nietzsche

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.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities
Crosslisted	
	PHIL 329 ; POLS 329

HIST 330: Southern Africa: Between Mandela and Mugabe

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.

Credits	2
Degree Attributes	AU: Global Perspective SoAD: Humanities

HIST 340: Ukraine: Between Putin and the West

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.

Credits	2
Degree Attributes	AU: Global Perspective SoAD: Humanities

HIST 354: History and Politics of the Middle East

This course offers an exploration of the ways in which two sets of transnational forces have together shaped the politics of the Middle East over the past four decades: A) the resurgence of “political Islam” within the wider Muslim world and B) the increasingly complex and direct intervention of the United States and other external powers in the region. Focal points include legacies of regional empires (Islamic; Ottoman; Safavid; etc.) and of European colonialism; the evolution of the Israeli-Arab/Palestinian conflict; the Iranian Revolution; Sunni-Shiite sectarian tensions/rivalries (centered around a Saudi-Iranian fulcrum since 1979); Iraq’s recurrent slides toward war; the anti-authoritarian struggles of the Arab Spring (particularly in Tunisia and Egypt); Syria’s violent fragmentation (including the rise of ISIS as well as a wide array of outside interventions by self-serving nation-states) and 21st-century Turkey under Erdogan’s “moderate” version of political Islam. Along the way we will endeavor to identify and to appreciate both key overarching patterns that are widely shared throughout the Middle East and important differences that mark the region’s distinct national and sub-national communities.

Credits	4
Degree Attributes	AU: Global Perspective

HIST 358: Modern China

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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Humanities SoAD: Humanities

HIST 360: Topics in History/American

Studies of different American historical themes; with topics varying each time the course is given.

Credits	1-4
Degree Attributes	CoB: Humanities SoAD: Humanities

HIST 363: Goths Saxons and Vikings: The Germanic Tribes from Roman Times to the Norman Conquest

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.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities

HIST 364: Roman Britain

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.

Credits	2
Degree Attributes	SoAD: Humanities

HIST 370: US History Through Film

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.

Credits	4
Degree Attributes	SoAD: Humanities

HIST 372: America as a World Power 1898-Present

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)

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities
Semester Offered	Alternate Years

HIST 377: History of American Slavery

A history of American slavery and race relations from the 17th century until emancipation. (Sufficient demand)

Credits	2
Degree Attributes	CoB: Humanities SoAD: Humanities
Semester Offered	Sufficient demand

HIST 382: Latin American Politics

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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Social Science SoAD: Humanities
Crosslisted	
POLS 382	

HIST 383: The Nazi Holocaust

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.

Credits	2
Degree Attributes	AU: Global Perspective CoB: Humanities SoAD: Humanities

HIST 385: Internship in History

Internship under supervision. Available irregularly.

Credits	1-4
Degree Attributes	SoAD: Humanities

HIST 388: Empire and Nation in Eastern Europe

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)

Credits	4
Degree Attributes	AU: Global Perspective CoB: Humanities SoAD: Humanities

HIST 391: Looting Europe: How Hitler Stole the Continent's Art

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)

Credits	4
Degree Attributes	AU: Global Perspective SoAD: Humanities

HIST 410: Writing History

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.

Credits	4
Degree Attributes	SoAD: Humanities

HIST 450: Independent Study

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.

Credits	1-4
Degree Attributes	SoAD: Humanities

HLPM 201: The Health Care Delivery System

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.(Fall - even years)

Credits	3
Degree Attributes	CoB: Social Science
Crosslisted	
MBA 601	
Semester Offered	Fall - Even Years

HLPM 205: Public Health

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. (Fall - even years)

Credits	3
Degree Attributes	CoB: Social Science
Crosslisted	
MBA 602	
Semester Offered	Fall - Even Years

HLPM 300: Topics in HLPM

Topics not covered in other Health Planning and Management courses are covered. Topics vary each term.

Credits	1-3
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HLPM 301: Healthcare Policy

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. (Fall; odd years)

Credits	3
Degree Attributes	CoB: Social Science
Semester Offered	Fall - Odd Years

HLPM 302: Healthcare Management

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. (Allen (Winter))

Credits	3
Semester Offered	Allen (Winter)

HLPM 304: Power and Politics in Health Care

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. (Allen/Summer)

Credits	3
Degree Attributes	CoB: Social Science
Crosslisted	
MBA 604	
Semester Offered	Allen/Summer

HLPM 308: Health Care Finance for Non-Financial Managers

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.(Allen/Summer)

Credits	3
Semester Offered	Allen/Summer

HLPM 310: Legal and Ethical Issues in Healthcare

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. (Spring; even years)

Credits	3
Degree Attributes	CoB: Social Science
Crosslisted	
MBA 606	
Semester Offered	Spring - Even Years

HLPM 485: Internship

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. (Allen Winter; Spring; Summer alternate years)

Credits	3
Degree Attributes	CoB: Field Experience
Semester Offered	Allen (winter); Spring; Summer alternate years

HLPM 495: Seminar: Healthcare Planning and Management

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. (Fall; even years)

Credits	3
Semester Offered	Fall; even years

HONR 101: Smash Stuff: SustainMaterials

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 102: Alfred E. Nigmas

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'll study; develop; and solve puzzles of many forms - numerical; alphabetical (words); and perhaps mechanical. In addition to focusing on the history and importance of cryptography; ciphers ranging from simple substitution to technologically advanced systems will be discussed. Students will also design their own puzzles or ciphers.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 103: Terra Cotta

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. Note: this seminar will meet from 6:20-8:10.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 104: Quest for Knowledge: Dungeons and Dragons

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 105: Artificial Intelligence: Fiction and Future

“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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 106: Corporate Scandals & Business

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!

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 107: Evolution of the DIYer

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 109: Crochet: Pattern and Improvisation

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 110: ZINE Machine

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

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 111: Two-Faced: Alter Egos and Other Selves

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 112: Star Wars: Myth Magic & Mania

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 113: Training Methodology: Spartans

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 114: Let’s Talk About Death

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 116: Difficult Womxn

“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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 117: The Food Lab

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 119: Film Photography

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 120: From Farm to Table: The Importance of Being Local

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 121: Natural Glasses

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 122: Culture Cuisine Film & Food

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 123: Muggles Magic and Mischief: The Science and Psychology of Harry Potter

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).

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 124: T'ai Chi: A Way of Life

T'ai Chi is a way of life that has been practiced by the Chinese for many centuries. This meditative; peaceful martial art; is known and regularly practiced daily by millions of people throughout the world. This course intends to have dual emphases. Academically; students will be introduced to T'ai Chi's early history and its evolution into the contemporary era. To this end; we will explore T'ai Chi's philosophical background as it links with Chinese culture; with occasional comparisons and contrasts to Western thought. Readings will provide additional stimuli for class discussions; which will include what is meant by the energy Chi and the internal power of Jing. Students will also learn approximately half of the 64 movements of the form and the physical/mental/ meditative preparation required for proper learning. Proper practice will provide the student with a balanced mind; spirit; and body!

Credits	2
Degree Attributes	AU: Wellness (Fall '19)
Prerequisites	
Be in the Honors Program	

HONR 125: Watching The Sopranos: The Psychopathology of Everyday Violence

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 128: The Art of Subcultures

Punk; Anime; Beatniks; Flower Power; Krunk; Grunge; Afrofuturism; Warcore; Preppers; Trekkies... A subculture is a group of people who differentiate themselves from the parent culture to which they are inextricably connected. In this class; we will take an investigative and appreciative look at the aesthetics; which could include visual art; fashion; body modification; music; or dance; created by subcultures around the world to communicate and strengthen group identity.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 129: Soft Core: An Introduction to Textile Arts

Have you ever wanted to make your own silk scarf; create a hand-woven wall hanging or enhance your clothes with embroidery? Get ready to give your fingers a workout. In this course we work with batik and other silk painting techniques; construct hand looms for weaving experiments; explore basic embroidery stitches for artworks and wearables; and look at historical and contemporary fiber artists for reference and inspiration. A student project is required. There is a fee to cover the costs of materials.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 131: Drinking up: The Science and History of Alcohol

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 132: Wanderlust

Experience walking as a method of investigating people; place; concept; and the environment. In this course we explore the history of walking; walking art works; and the rural and urban environment. There are readings/viewings/ research about walking; walking assignments each week; and experiential walking projects created by the students. No specific experience is necessary. We explore walking through your chosen lens of interest - science; history; art; environmental studies; architecture; engineering etc. Walking shoes and warm clothes required.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 134: True Crime

Jack the Ripper. Lizzie Borden. The Lindbergh baby. O.J. Simpson. These and other true crime stories gripped the public imagination and permanently changed popular culture – but why? This seminar will examine some of history’s most famous crimes; questioning how gender; class; race; media depictions; and other factors affect how certain crimes impact our consciousness while others fade away.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 136: Fashion and Print: What Are They Wearing?

Explore recent history of printed clothing through social media and popular culture. Get a hands on approach in all aspects of designing; printing; and wearing your own screen printed creations. We discuss color theory; practical design elements; Photoshop; and of course all the current trends shaping what is commercially sold in stores. A final critique of your ‘mini collections’ in the form of a gallery opening will showcase your talents. A lab fee is required to cover some materials.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 137: American Gothic: Films of David Lynch

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 140: Spirituality and Art

The main objective of this course is to explore the topic of spirituality as part of a creative practice. We begin with an exploration of artists touching on spirituality in their practice. Readings on Mariko Mori; Yoko Ono and John Cage will launch the weekly class discussions. The direction of the course will be student led. Possible additions for the class could include meditations; an introduction to sound healing and energy work; or intuition development as a creative tool. Assignments include a journal and smaller interim visual or written projects; which will lead to a final project.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 141: Wonder Woman: Window into Pop Culture Women’s Issues & Child Psychology

Created in 1941; Wonder Woman is the oldest and most popular female comic book hero. While well-ingrained in society today; her character and comic books in general created national backlash and tension in their early years.Using the book “The Secret History of Wonder Woman” by Jill LePore; this class explores the interwoven topics of women’s rights; pop culture; comic books; and child psychology during the mid-20th century. Discussion; guest lecturers; readings; films; and primary sources of the day additionally help illustrate and expand upon the issues.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 142: Jobs and the Environment

The class explores the ability of the United States to balance job creation against damage to the environment. Scott Pruitt; new head of the Environmental Protection Agency [EPA]; stated in his first meeting with EPA employees that there should not be a contradiction between environmental protection and job creation. We explore through the media how the EPA is walking this fine line. Class projects and classroom discussions will examine the expected expanded role for fossil fuels in power generation and the resulting impact on the environment.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 143: The Pharmaceutical Industry

How are drugs discovered? How are their safeties determined? How much does it cost? Who pays for it? Why do medicines cost so much? Have you ever asked yourself any of these questions? Perhaps only rivaled by the political system; the pharmaceutical industry is one of the most critically considered industries and enterprises in society today. But is that image deserved? All these questions and more will be answered as we discuss the pharmaceutical industry and drug development. The good; the bad; and the ugly of this necessary industry are covered. No prior experience in a science class is necessary. Student work includes participation in class discussions and a term paper and presentation on a pharmaceutical compound of the student's choosing.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 144: Adverse & Protective Child Exp

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%).

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 145: A Dark and Stormy Night

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 146: Gone to the Dogs

The symbiotic relationship between dogs & humans has evolved over time; and is shown through mythology; history; and culture. We'll examine the science and evolution of dogs; occupations of dogs; the economics of dog/pet ownership in the USA; and partake in debates on "adopt don't shop;" breeds vs. mutts; kill versus no-kill shelters; and stereotypes of dog breeds. We'll talk the mutual benefits of owning a pet; and outreach to local shelters and rescues.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 147: This Course Sucks: A Vampire Extravaganza

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 149: The Aliens Did It?

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 150: Bad Words

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 153: Chat GPT for Dummies

Explore the limits and uses of ChatGPT and artificial intelligence in this comprehensive course. Dive into assignments like developing prompts; creating rubrics for AI assessments; generating images and music; and engaging in conversations with ChatGPT. Gain hands-on experience and deepen your understanding of AI's capabilities and applications.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 154: From The Clash to Kendrick: The Art of Protest Music

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; first looking at specific touchstone political crises for punk artists who felt compelled to create in the face of injustice; rage; and oppression. 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 utilizing the new Media Lab; 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; and Bikini Kill. Hip-hop artists and albums we will listen to are: Public Enemy; NWA’s Straight Outta Compton; Killer Mike; Dead Prez; Erykah Badu’s New Amerykah albums; noname’s Room 33; and Kendrick Lamar’s Mr. Morale and the Big Steppers. Additions as suggested by the class are more than welcome!

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 155: Cut-Bend-Fold-Bind

Exploring paper; fabrics; and pigments; this course dives into different techniques of making hand and machine-bound books. A wide variety of stitches will be explored; as well as some advances in technology with the use of the digital glue binder and fabric printer. Assignments involve physical book creation/design; discussion/critique; and cumulate in a pop-up exhibition. Exploration and discussion of artists’ and rare books in the Scholes Library will be used as inspiration.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 158: Personal Financial Planning

The purpose of this course is to introduce honors students to the fundamentals of personal financial management in a more creative; interactive and dynamic manner that is used in the regular class. The class includes subject area experts sharing knowledge; a stock investing competition with a \$50 cash prize for the winner; and hands-on exercises. Our focus is on wealth accumulation; paying off student loans; investment planning; insurance planning; retirement planning and estate planning. At the conclusion of the course; each student develops their individual financial plan personalized for their unique circumstances.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 159: Monsters from Folklore to Reality

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 161: The Doctor in the Police Box

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 162: The Science of Baking

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 163: Bodies: Trained Perceived Experienced

Pop-culture shapes perceptions and experiences of the human body. This class looks at popular ways of training; portraying; and understanding the body in the 20th and early-21st centuries including: physical culture and fitness; advertising and mainstream medical science. Through a theoretical and embodied survey of these worlds; students learn about how popular Western thought on bodies and movement influences perceptions of the body—what it can do and how we experience physicality.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 165: Data Structures and Algorithms Using Python

As artificial intelligence and automation transform industries; demand for data-savvy employees is far outstripping the available supply. This course introduces beginning students to data structures and algorithms using Python; one of the most widely used programming language in computing. It allows students to focus on problem-solving skills and algorithm development. The primary activities include lectures; discussions; and labs. By the end of the course; students will be able to use Python to manipulate data and run basic data analyses.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 171: The Psychology of Heavy Metal and Punk Rock

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 172: Maple Syrup: The Real Thing

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 176: Cult(ure)

This course delves deep into the world of cults. By examining famous cults in recent history; we begin to unravel the cultural; political and social contexts that have allowed for these fanatic new religious movements to thrive. Apocalyptic end times; civil rights; psychedelics; sexual deviancy; megalomania; symbolism; art; fashion; music; film - these are just a few topics we cover over the course of the semester through lectures; films; readings and projects. For the final project each student defines and develop their own individualized cult with a focus on a written manifesto; ritual and cult fashion.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 178: American Gangster

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 179: As Gaeilge: Irish and Irishness

Forget your stereotypes. This course delves into contemporary Irish culture in and from Ireland. Film; food; theater; art; dance; music; sport; perhaps some history and definitely an introduction to conversational Irish language (Gaeilge)- these are just a few of the topics we cover over the course of the semester. Coursework features hands-on workshops; readings; films; class discussions; individual and group projects as well as a possible field trip.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 181: Too Gouda To Be True

Soft and drippy triple cream brie; or a hard and pungent gruyere? Sample a weekly cheese while learning about its origin; production; and suggested serving. Students present on their preferred cheese to the group; allowing for discussion; analysis; and investigation of taste; texture; and smell. The semester culminates in the class’s production of a digitally bound; laser-cut; Swiss cheese triangular book - graphing; scoring; and mapping the multitude of sampled cheeses. Purchase of ONE cheese required per student to share and a \$15 lab fee to cover accompanying snacks; beverages; and book production.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 183: Can We Weather the Weather?

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 184: The Psychedelic Experience

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 185: Misconduct in Research and Science: Falsifiers Filchers and Genetic Frankensteins

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 188: CAMP

Is your Alfred life an unending blur of gray slush and tedious blue screen headaches? Are you dressed slovenly in untailored rags? CAMP! is your cure. Our goal is; as define by Mark Booth; “to present oneself as being committed to the marginal with a commitment greater than the marginal merits.” We will practice fully committed self-presentation. In CAMP!; we want to go full out and 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. The Alfred Honors students will design a project that embraces camp’s “love of the unnatural” as explained by Susan Sontag. Can you take CAMP! far enough?

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 189: Laughter Crafters: Political Cartoons & Memes 2020

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 190: Mathematics & Machine Guns

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 192: Printed Matter

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 194: Financial Wellbeing

Do you want a bright financial future? In this class we will explore the latest research and insights on our relationship with money; how our attitudes and beliefs can support (or detract from) our well-being; and how people routinely make financial decisions that are not in their best interests.

Credits	2
Degree Attributes	AU: Wellness (Fall '19)
Prerequisites	
Be in the Honors Program	

HONR 195: Training Methodology: Ancient Spartans to Spartan Racers

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 196: Your Brain on Nature

Come 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 is interacting with nature; and we'll explore and 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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 197: Do Not Pass Go and Do Not Collect \$200: What We Can Learn Through Board Games

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 198: Parapsychology

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 199: Sleep Dreams and Nightmares

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 200: Positive Psychology

This class will address the science of thriving; addressing questions such as what it means to be “happy” and how we can cultivate well-being as individuals; in organizations; and in communities. We will discuss how positive psychology can be applied in various domains like education; healthcare; work; and personal relationships.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 201: The Theory and Practice of Tim

Who doesn't want an opportunity to travel through time? See what dinosaurs were really like; witness your favorite historical event in living color; find extra time to write your paper that you didn't finish on time yesterday. Each week we'll spend class time split between discussing the assigned short story/video and the science of time travel

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 203: Engineering Origami: A Fusion of Art Design and Mechanics

Engineering Origami merges the ancient Japanese art of origami with mechanical engineering principles. Origami (折り紙; ori meaning folding and kami meaning paper) transforms flat sheets of paper into intricate 3D shapes; and its principles extend beyond art to provide innovative engineering solutions. This course introduces students to the structural and functional potential of folded paper; showing how origami can address engineering challenges in fields like aerospace; materials science; robotics; and architecture. Students will explore key principles like fold geometry; material efficiency; and deployable systems; while learning to apply mechanical concepts such as stress analysis and material properties to create functional origami structures. Through hands-on learning; students will fold traditional designs and study real-world applications of origami; including shape-shifting systems; metamaterials; and robotics. Weekly assignments and videos will stimulate in-class discussions; and the course will include a final project that requires students to design and present their own origami-inspired engineering solution.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 204: Credible Costumed Crusader Creation: The Science and Psychology of Superheroes

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 205: Fake News Real Consequences

Clickbait headlines. Deepfakes. Misinformation spreading faster than the truth. In today's digital world; separating fact from fiction has never been more difficult—or more important. This seminar will explore how journalism; social media; and ethics collide in the age of viral news. How do we decide what to believe? Who controls the narrative? And what happens when misinformation takes on a life of its own? Through interactive discussions; case studies; and media experiments; students will uncover the power of storytelling and the dangers of digital deception. The course will include weekly discussion reflections; a presentation on a media-related controversy; and a final creative project exploring the impact of misinformation in modern society.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 206: Screen Print & the T-Shirt

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.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 207: Psychology of Music in Everyday Life

This course explores the role of music in social; emotional; political; and daily life. Discover drum cultures that have rhythms for every aspect of life and death. Learn how to use music to shut off that nagging; self-critical voice in your head. Religion; pop culture; shopping malls; movie soundtracks...explore the science and magic of music. Music has power like nothing else. We laugh; live; love; die to music. It has the power to hurt; and the power to heal. Music can bring us together or tear us apart. Music helps us relax and gets us fired up. Music affects nearly every part of the human brain; and it can even kill cancer. Assignments in this class will include short weekly readings; in class discussions; and a semester long project focused on personal and/or community-based music.

Credits	2
Prerequisites	
Be in the Honors Program	

HONR 450: Independent Study

Credits	1-4
Prerequisites	
Be in the Honors Program	

HONR 480: Senior Thesis

Credits	2
Prerequisites	
Be in the Honors Program	

IBUS 420: Wash Sem/Int'l Bus&Trade Sem I

Credits	4
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IBUS 421: Wash Sem/Intl Bus&Trade Sem II

Credits	4
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IBUS 423: Wash Sem/Int'l Bus&Trade Intrn

Credits	4
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ISM 450: Independent Study

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.

Credits	1-4
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ISM 495: Baccalaureate Project

Senior project within the Individually Structured Major Program under supervision of the student's Advisory Board. Prerequisite: Permission of Advisory Board Chair.

Credits	4-6
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ITAL 101: Italian I

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. (On demand)

Credits	4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities
Semester Offered	On demand

ITAL 102: Italian II

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. (On demand.)

Credits	4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities
Prerequisites	ITAL 101
Semester Offered	On demand.

ITAL 200: Special Topics in Italian

Content varies from year to year. Prerequisite: [ITAL 102](#) or permission of instructor.

Credits	1-4
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ITAL 450: Independent Study

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.

Credits	1-4
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LATN 101: Latin I

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.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities

LATN 102: Latin II

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.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities
Prerequisites	LATN 101

LATN 450: Independent Study

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.

Credits	1-4
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LAW 241: The Legal Environment of Business

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.

Credits	3
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LAW 300: Special Topics

Topics not covered in other Law courses are presented.

Credits	1-3
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LAW 442: Commercial Law

An overview of the common law principles and statutory law affecting commercial transactions. Topics include agency; partnerships; corporations; bankruptcy; commercial paper and sales.

Credits	3
Prerequisites	LAW 241

LEAD 100: Topics in Leadership

Credits	1-4
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LEAD 101: Transformational Leadership

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.

Credits	1
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LEAD 201: Equality and Leadership

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.

Credits	2
Degree Attributes	CoB: Social Science

LEAD 300: Special Topics in Leadership

In this course we explore areas not covered by other leadership courses. Topics vary from term to term.

Credits	1-4
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LEAD 301: Improving Alfred University

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.

Credits	2
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LEAD 450: Independent Study

Credits	1-4
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LEAD 475: Leadership Practicum

The course explores leadership theory in practice. Students will continue their examination of leadership theory and develop a substantial project that will put their leadership skills into practice. The objective of this course is to foster appropriate and effective leadership skills in a real-world setting and application.

Credits	2
Degree Attributes	CoB: Field Experience
Prerequisites	
	LEAD 201

LEAD 476: Service Leadership Experience

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.

Credits	2
Degree Attributes	CoB: Field Experience AU: Service Learning Courses
Prerequisites	
	LEAD 475

LIBR 200: Special Topics

Special Topics in Library; Research and Information. Topics offered each term can vary.

Credits	1-4
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LIBR 205: Information and Society

This course will give students a foothold in our rapidly shifting information landscape by introducing a framework for information literacy and exploring the role of information in society; covering topics like misinformation; artificial intelligence; paywalls; and personal data. Upon completing this course; students will be equipped with the knowledge; tools; and strategies necessary to exist as an informed and ethical person in the 21st century. (Bi Annually).

Credits	2
Crosslisted	
	HIST 205/SJST 205
Semester Offered	Bi Annually

MATH 100: Special Topics in Mathematics

Credits	1-4
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MATH 101: Communicating with Numbers

Topics include ratios and proportions; proportionality as distinct from proportions; constant of proportionality; rates; percentages; total change vs. percent change; and handling data.

Credits	4
Degree Attributes	CLAS: (03) Quant Reasoning CoB: Quant Reasoning

MATH 102: Mathematics for Teachers: Grades K-6

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.

Credits	4
Degree Attributes	CLAS: (03) Quant Reasoning CoB: Quant Reasoning

MATH 104: Quantitative Methods for Business

An introduction to the quantitative methods needed by students in business-related majors. Topics covered include equations and graphs; functions; and systems of equations.

Credits	4
Degree Attributes	CLAS: (03) Quant Reasoning CoB: Quant Reasoning

MATH 118: Discrete Mathematics

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.

Credits	4
Degree Attributes	CLAS: (03) Quant Reasoning CoB: Quant Reasoning

MATH 131: Discrete Mathematics

An introduction to a variety of mathematical concepts and tools which are of particular use in computer science. Topics include logic and sets; relations and functions; graphs; combinatorics and Boolean algebra.

Credits	4
Degree Attributes	CLAS: (03) Quant Reasoning CoB: Quant Reasoning

MATH 151: Calculus I

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](#).

Credits	4
Degree Attributes	CLAS: (03) Quant Reasoning CoB: Quant Reasoning

MATH 152: Calculus II

A continuation of single variable calculus including transcendental functions; methods of integration; and series.. Instructor permission required for students with credit in [MATH 253](#).

Credits	4
Degree Attributes	CoB: Quant Reasoning
Prerequisites	
MATH 151	

MATH 181: Discrete Mathematics

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.

Credits	4
Degree Attributes	CLAS: (03) Quant Reasoning CoB: Quant Reasoning

MATH 200: Topics in Mathematics

Special topics in mathematics which vary from year to year. (Sufficient demand)

Credits	1-4
Crosslisted	
demand	
Semester Offered	Sufficient

MATH 231: Introduction to Data Science

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. (Spring; odd years)

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	
MATH 151	
Semester Offered	Spring; odd years

MATH 250: Independent Study

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.

Credits	1-4
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MATH 253: Calculus III

Multivariate calculus; derivatives and integrals of vector functions with Stoke's and Green's theorems.

Credits	4
Degree Attributes	CoB: Quant Reasoning
Prerequisites	
MATH 152	

MATH 271: Differential Equations

Ordinary differential equations with applications to the sciences.

Credits	3
Degree Attributes	CoB: Quant Reasoning
Prerequisites	
MATH 253	

MATH 281: Foundations of Higher Mathematics

An introduction to logic and proof: Topics include sets; symbolic and predicate logic; inductions; and cardinality.

Credits	4
Prerequisites	
	MATH 253

MATH 305: Theory of Computation

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. (Fall/Spring)

Credits	4
Prerequisites	
	MATH 281
Semester Offered	Fall/Spring

MATH 331: Mathematics from a Historical Perspective

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.

Credits	3-4
Prerequisites	
	MATH 253 , ENGL 102 or ENGR 110

MATH 351: Introduction to Operations Research

Optimization techniques with application to decision making. Linear programming and other topics; e.g., network analysis; dynamic programming; game theory; stochastic processes; queueing theory.

Credits	4
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MATH 361: Complex Variables

An introduction to the algebra and geometry of complex numbers; calculus of analytic functions; Cauchy-Riemann equations; complex integration; Cauchy integral formula; and residues.

Credits	4
Prerequisites	
	MATH 253

MATH 371: Linear Algebra

The concepts of vector space; independence; basis and linear transformations; with applications to systems of linear equations; eigenvalue problems and bilinear and quadratic forms.

Credits	4
Degree Attributes	CoB: Quant Reasoning
Prerequisites	
	MATH 253

MATH 381: Mathematical Statistics

The theoretical basis for statistics including probability; random variables; expectation; a curve of important probability distributions; sums of independent random variables; and confidence intervals.

Credits	4
Prerequisites	
	MATH 253

MATH 382: Actuarial Exam Preparation

The content includes definitions and applications in risk management and insurance using calculus-based probability theory. Taken in preparation for the Society of Actuaries Exam P/Casualty Actuarial Society Course 1 exam.

Credits	1
Corequisites	
	MATH 391

MATH 391: Statistical Methods

This course introduces statistical inference and is a study of different methods of statistical estimation and tests of statistical hypotheses.

Credits	3
Prerequisites	
	MATH 381

MATH 400: Topics in Mathematics

Special topics in mathematics which vary from year to year.
(Sufficient demand)

Credits	1-4
Semester Offered	Sufficient demand

MATH 401: Advanced Engineering Mathematics

Fundamental concepts of applied analysis including Fourier series and integrals; Laplace transforms; partial differential equations and boundary value problems and special functions.

Credits	4
Prerequisites	
	MATH 271
Crosslisted	
	CEMS 506

MATH 450: Independent Study

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.

Credits	1-4
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MATH 461: Geometry

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](#).

Credits	4
Prerequisites	
	MATH 253

MATH 481: Modern Algebra

The fundamental structures and techniques of algebra including topics such as groups; rings; fields; quotient structures; theory of equations and polynomials.

Credits	4
Prerequisites	
	MATH 281

MATH 491: Advanced Calculus

Elements of real function theory including some notions from logic; the topology of the real line; continuity; uniform continuity; differentiation and limits of sequences.

Credits	4
Prerequisites	
	MATH 281

MECH 211: Statics

Two and three-dimensional force systems; the concept of equilibrium; analysis of trusses and frames; centroids; bending moment and shear diagrams; friction.

Credits	3
Prerequisites	
	MATH 152 , PHYS 125

MECH 212: Dynamics

Rectilinear and curvilinear motion; translation and rotation; momentum and impulse principles; and work-energy relationships.

Credits	3
Prerequisites	
MATH 253 , PHYS 125	

MECH 241: Mechanics of Materials

The mechanics of solid deformable bodies; members subjected to tension; compression; flexure and torsion. Beam topics; stability of columns; combined stresses and strains.

Credits	3
Prerequisites	
MECH 211	

MECH 320: Thermodynamics I

Thermodynamic properties of gases; vapors and liquids. Laws of thermodynamics; energy and availability analysis.

Credits	3
Prerequisites	
MATH 253 , PHYS 125	

MECH 321: Thermodynamics II

Applications of thermodynamic principles to the analysis of energy systems including power and refrigeration cycles. Mixtures and solutions; chemical reactions and equilibrium.

Credits	3
Prerequisites	
MECH 320	

MECH 324: Fluid Mechanics I

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.

Credits	3
Prerequisites	
MATH 253 , MECH 212	

MECH 326: Heat Transfer

Principles of steady-state and transient conduction; radiation and convection. Applications to heat exchangers and environmental problems.

Credits	3
Prerequisites	
MECH 320 , MECH 324	

MECH 327: Thermal Sciences Laboratory

Experiments are conducted to illustrate aspects of fluid mechanics; thermodynamics; and heat transfer.

Credits	2
Prerequisites	
MECH 324 , MECH 326	
Corequisites	
MECH 326	

MECH 343: Mechanics of Materials Laboratory

Experiments designed to illustrate the principles of mechanics of materials and the methods of experimental mechanics.

Credits	2
Prerequisites	
MATH 271 , MECH 211 , MECH 241	
Corequisites	
MECH 343L	

MECH 343L: Laboratory-Mech of Matls Lab

Credits	0
Corequisites	
MECH 343	

MECH 354: Mechatronics

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](#).

Credits	3
Prerequisites	
ENGR 220 (formerly ELEC 220)	

MECH 362: Kinematics and Dynamics of Machinery

Analysis and synthesis of mechanisms. Applications to reciprocating engines; cams; gears; flywheels; balancing; critical speeds; torsional vibration.

Credits	3
Prerequisites	
MECH 212	

MECH 364: Machine Design I

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.

Credits	3
Prerequisites	
CEMS 251 or MECH 241	

MECH 366: Manufacturing

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.

Credits	3
Prerequisites	
Junior standing; MECH 212 ; and CEMS 214 or ENGR 204 . Pre- or Co-requisite: ENGR 202 or ENGR 305 .	
Corequisites	
MECH 366L	

MECH 366L: Laboratory-Manufacturing

Credits	0
Corequisites	
MECH 366	

MECH 400: Topics in Mechanical Engineering

Special topics in mechanical engineering which vary from year to year. Prerequisite: Permission of instructor. (Sufficient demand)

Credits	2-4
Semester Offered	Sufficient demand

MECH 415: Mechanical Vibrations I

Harmonic oscillator; response of damped linear systems; multi-degree of freedom systems; introduction to vibrations of continuous systems.

Credits	3
Prerequisites	
MATH 271	

MECH 417: Introduction to Finite Element Analysis

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.

Credits	3
Prerequisites	
CEMS 251 or MECH 241 , MATH 271	

MECH 422: Control Systems

Linear feedback control system modeling analysis; and compensation techniques.

Credits	3
Prerequisites	
ELEC 322 or RNEW 322	

MECH 424: Fluid Mechanics II

Advanced topics in fluid mechanics: compressible flows; boundary layers; potential flow; turbomachinery.

Credits	3
Prerequisites	
MATH 271 , MECH 320 , MECH 324	

MECH 430: Computational Fluid Dynamics

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.

Credits	3
Prerequisites	
MATH 271 , MECH 324 , MECH 326	

MECH 434: Heating Ventilation and Air Conditioning

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.

Credits	3
Prerequisites	
MECH 321 and MECH 326 or CEMS 332.	

MECH 435: Industrial Control via Microcontroller

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.

Credits	3
Prerequisites	
MATH 271	

MECH 438: Alternative Vehicle Energy Control and Powertrain Design

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.

Credits	3
Prerequisites	
ENGR 104 , ENGR 220 (formerly ELEC 220)	

MECH 448: Mechanics of Composite Materials

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.

Credits	3
Prerequisites	
MECH 241 ; MECH 244 or CEMS 214 ; MATH 271	

MECH 450: Independent Study

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.

Credits	1-3
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MECH 464: Machine Design II

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.

Credits	3
Prerequisites	
MECH 364	

MECH 486: Modeling and Simulation of Dynamic Systems

Mathematical modeling of physical systems and simulation of linear system responses. System response to varied inputs are studied using classical techniques. Laplace transforms and modeling and simulation software.

Credits	3
Prerequisites	
[MECH 326 or CEMS 332] and [ELEC 220 or CEMS 221]	

MECH 495: Senior Design Project I

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.

Credits	3
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MECH 496: Senior Design Project II

Continuation of [MECH 495](#) and culmination in a comprehensive design report and developmental prototype; as required.

Credits	3
Prerequisites	
MECH 495	

MGMT 229: Intro to Equine Busi Management

This course emphasizes the philosophy and theory of leadership within an equine organization; producing a deeper understanding and strengthening a student's mental and physical understanding of being a leader within the equestrian industry.

Credits	3
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MGMT 300: Topics in Management

Topics not covered in other Management courses are presented.

Credits	1-4
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MGMT 305: Gender and Organizations

This course builds an understanding of gender issues within organizations as well as policies that organizations can implement to create a more equitable work environment. Topics of discussion encompass the impact of gender on communication; influence; and perceptions of competence; what progress has been made regarding gender equality and what still remains to be resolved. (Cross-listed as [WGST 305](#))

Credits	3
Degree Attributes	CoB: Social Science

MGMT 306: International Human Resources

The course focuses on the fundamental HR processes such as HR planning; staffing; performance management; training and development; compensation and benefits; and industrial relations from an international point of view. Furthermore; broad HR activities of procurement; allocation; and utilization; the national and regional comparisons in IHRM activities; and challenges of managing human assets worldwide are covered.

Credits	3
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MGMT 318: Gender Equity in Business

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.

Credits	3
Degree Attributes	CoB: Social Science
Crosslisted	
	WGST 318

MGMT 322: Management Analytics

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.

Credits	3
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MGMT 328: Management and Organizational Behavior

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.

Credits	3
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MGMT 330: Farm and Stable Management

This course is designed to give students a understanding in the concepts and methods of management techniques used in a variety of equine properties.

Credits	3
Prerequisites	
	MGMT 229 and EQUS 200

MGMT 450: Independent Study

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.

Credits	1-4
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MGMT 460: Seminar in Management

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.

Credits	3
Prerequisites	
	MGMT 328

MGMT 472: Human Resource Management

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.

Credits	3
Prerequisites	
	MGMT 328

MGMT 484: Operations Management

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.

Credits	3
Prerequisites	
ACCT212 & (BUSI113 or ENGR305)	

MGMT 485: Equestrian Operations Managmnt

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 and utilities. Some labs outside. Prerequisite: Junior Standing

Credits	3
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MGPR 204: Introduction to Museum and Gallery Studies

An introduction to museums and galleries focusing on their history; theory; and practice across various types; including art; history; and science. Explores how museums and galleries reveal the social and cultural ideologies of those who build; fund; work in; and visit them.

Credits	4
Degree Attributes	SoAD: Humanities-'Other'

MGPR 305: Museum Operations & Engagement

A behind-the-scenes survey of the work of museums; focusing on collections care; audience accessibility; and digital engagement. Students gain practical experience with emerging tools and strategies that are transforming how cultural institutions preserve and share their collections. (Fall)

Credits	2
Semester Offered	Fall

MGPR 385: Museum and Gallery Studies Internship

Faculty-supervised practical experience at a museum or gallery; concentrating on one or more of the learning outcomes of the Museum and Gallery Practices minor. Requirements include a minimum of 45 hours of practical experience per credit; a weekly learning journal ; and a final learning report. *(All terms)

Credits	1-4
Semester Offered	All Terms

MILS 101: Foundations of Officership

(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.

Credits	1
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MILS 101L: Foundations of Officership Lab

Credits	1
Degree Attributes	AU: Phys Fitness (Fall '19+)

MILS 102: Basic Leadership

(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.

Credits	1
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MILS 102L: Basic Leadership Lab

Credits	1
Degree Attributes	AU: Phys Fitness (Fall '19+)

MILS 201: Individual Leadership Studies

(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.

Credits	2
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MILS 201L: Individual Leadership Studies Lab

Credits	1
Degree Attributes	AU: Phys Fitness (Fall '19+)

MILS 202: Leadership & Teamwork

(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. (Spring)

Credits	2
Semester Offered	Spring

MILS 202L: Leadership & Teamwork Lab

Credits	1
Degree Attributes	AU: Phys Fitness (Fall '19+)

MILS 301: Leadership Problem Solving

(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. (Fall)

Credits	3
Semester Offered	Fall

MILS 301L: Leadership Problem Solving Lab

Credits	1
Degree Attributes	AU: Phys Fitness (Fall '19+)

MILS 302: Leadership and Ethics

(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). (Spring)

Credits	3
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MILS 302L: Leadership and Ethics Lab

Credits	1
Degree Attributes	AU: Phys Fitness (Fall '19+)

MILS 401: Leadership and Management

(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. (Fall)

Credits	3
Semester Offered	Fall

MILS 401L: Leadership and Management Lab

Credits	1
Degree Attributes	AU: Phys Fitness (Fall '19+)

MILS 402: Officership

(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. (Spring)

Credits	3
Semester Offered	Spring

MILS 402L: Officership Lab

Credits	1
Degree Attributes	AU: Phys Fitness (Fall '19+)

MILS 450: Independent Study

Credits	1-4
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MIS 101: Analytics I

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.

Credits	3
Degree Attributes	CoB: Quant Reasoning
Corequisites	
MIS 101L	

MIS 390: Introduction to Management Information Systems

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

Credits	3
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MIS 450: Independent Study

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.

Credits	1-4
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MKTG 221: Marketing Principles and Management

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.

Credits	3
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MKTG 282: Sales Management

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

Credits	3
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MKTG 300: Topics in Marketing

Topics not covered in other Marketing courses are presented.

Credits	1-3
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MKTG 310: Graphic Design in Marketing

This course introduces students to graphic design; its creative process; and the importance of its role in business and marketing. In addition to an overview of the history of graphic design/typography; students will receive hands-on instruction in Adobe Creative Suite (inDesign and Photoshop) to develop a greater understanding of visual communications; as well as opportunities to develop the skills for effective interaction with people in creative services. Prerequisites: [MKTG 221](#) and instructor's permission.

Credits	3
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MKTG 311: Digital & Social Media Mrketing

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. (Spring)

Credits	3
Prerequisites	
MKTG 221	
Semester Offered	Spring

MKTG 322: Marketing Analytics

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. (Spring)

Credits	3
Prerequisites	
BUSI 113 , MIS 101 , MKTG 221	
Semester Offered	Spring

MKTG 333: Equine Marketing

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.

Credits	3
Prerequisites	
MKTG 221	

MKTG 379: Consumer Behavior

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.

Credits	3
Prerequisites	
MKTG 221	

MKTG 382: Sales Marketing

Learn about the life cycle of customer relationships and how it can dictate your success – from the initial sales call stage to advanced negotiations. The three main topics covered in this class are: Learn to conduct an effective sales call; drive value beyond price; and negotiate to maximize value. Each topic will be reviewed in depth; giving real world examples and exercises. Other topics include sales forecasting; sales quotas; and sales analysis.

Credits	3
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MKTG 400: Topics in Marketing

Intensive investigation of marketing techniques; theories and issues. Students are required to investigate specific topics; make class presentations and submit reports.

Credits	1-4
Prerequisites	
MKTG 221	

MKTG 450: Independent Study

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.

Credits	1-4
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MKTG 452: Market Research

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. Must be a Junior or Senior standing.

Credits	3
Degree Attributes	CoB: Field Experience
Prerequisites	
MKTG 221 + 1 Add'l MKTG Crse	

MKTG 453: Marketing Practicum

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. Junior Standing. (Fall)

Credits	3
Degree Attributes	CoB: Field Experience
Prerequisites	
MKTG 221 + 1 Add'l MKTG Crse	
Semester Offered	Fall

MKTG 454: Market Intelligence & Strategy

This course explores the actionable information needs of modern business for market intelligence and business analysis to aid in developing strategy. This course integrates quantitative insights from analytics with qualitative trending from market intelligence to develop effective communication product for the decision maker.

Credits	3
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MKTG 460: Seminar in Marketing

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.

Credits	3
Prerequisites	
MKTG 221 + 1 Add'l MKTG Crse	

MKTG 479: Consumer Behavior

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](#).

Credits	3
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MKTG 482: Sales Management

Concerned with the management of the personal selling function; this course uses theories and tools of behavioral sciences for developing an effective sales force through recruiting; selection; training; compensating and evaluation of sales performance. Emphasizes sales forecasting; establishment of sales quotas; and sales analysis. Prerequisite: [MKTG 221](#).

Credits	3
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MKTG 486: Integrated Marketing Communications

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. (Fall)

Credits	3
Prerequisites	
MKTG 221 + 1 Add'l MKTG Crse	
Semester Offered	Fall

MKTG 489: International Marketing

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.

Credits	3
Degree Attributes	AU: Global Perspective
Prerequisites	
MKTG 221	

MKTG 499: Strategic Marketing Management

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. (Spring)

Credits	3
Prerequisites	
	MKTG 221 + 1 Add'l MKTG Crse
Semester Offered	Spring

MUSC 101: Private Lessons-Piano

One half-hour private lesson per week. Private lesson fee includes the use of practice rooms. Note: Some sections may require permission of instructor.

Credits	1
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MUSC 102: Private Lessons-Voice

One half-hour private lesson per week. Private lesson fee includes the use of practice rooms. Note: Some sections may require permission of instructor.

Credits	1
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MUSC 103: Private Lessons-Brass

One half-hour private lesson per week. Private lesson fee includes the use of practice rooms. Note: Some sections may require permission of instructor.

Credits	1
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MUSC 104: Private Lessons-Woodwinds

One half-hour private lesson per week. Private lesson fee includes the use of practice rooms. Note: Some sections may require permission of instructor.

Credits	1
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MUSC 105: Private Lessons-Strings

One half-hour private lesson per week. Private lesson fee includes the use of practice rooms. Note: Some sections may require permission of instructor.

Credits	1
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MUSC 106: Private Lessons-Percussion

One half-hour private lesson per week. Private lesson fee includes the use of practice rooms. Note: Some sections may require permission of instructor.

Credits	1
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MUSC 107: Private Lessons-Guitar

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.

Credits	1
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MUSC 108: Private Lessons-Carillon

One half-hour private lesson per week. Private lesson fee includes the use of practice rooms. Note: Some sections may require permission of instructor.

Credits	1
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MUSC 110: Music Appreciation

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts CoB: Humanities

MUSC 112: Fundamentals of Musicianship

This A Block course is designed to equip students with essential theoretical skills needed to succeed in music Theory I and beyond. This course is offered tandem with [MUSC 113](#) - Creative Lab. May test out of the course by taking a placement exam. Offered in the Fall

Credits	1
Semester Offered	Fall

MUSC 113: Creative Lab

This B Block course is designed to build on and apply the foundational skills learned in Fundamentals of Musicianship ([MUSC 112](#)). May test out of the course by taking a placement exam. (Spring)

Credits	1
Prerequisites	MUSC 112
Semester Offered	Spring

MUSC 120: Music Theory I

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 reading from playing an instrument or vocal/choral experience; is required.

Credits	4
Degree Attributes	CLAS: (C) The Arts CoB: Humanities

MUSC 130: Beginning Class Piano I

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. No previous musical training required.

Credits	2
Degree Attributes	CLAS: (C) The Arts

MUSC 131: Beginning Class Piano II

A continuation of [MUSC 130](#). Beginning work in pedaling and phrasing; major scales; primary chords in major and minor in block and arpeggio form; composition; transposition and harmonization.

Credits	2
Degree Attributes	CLAS: (C) The Arts
Prerequisites	MUSC 130

MUSC 132: Beginning Voice Class I

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts

MUSC 133: Music of the Guzheng

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts

MUSC 135: Class Guitar I

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 music which includes standard notation; chord charts; and tablature.

Credits	2
Degree Attributes	CLAS: (C) The Arts

MUSC 136: Class Guitar II

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

Credits	2
Degree Attributes	CLAS: (C) The Arts
Prerequisites	
	MUSC 135

MUSC 200: Special Topics

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)

Credits	1-4
Degree Attributes	CLAS: (C) The Arts
Semester Offered	ufficient demand

MUSC 205: SOUND GATHERING: Music Sound and Environment

Alongside fieldwork; students will learn basic recording techniques; engage in theoretical readings - drawn from eco-musicology 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. No special expertise or equipment is needed; and guidance with audio editing programs is built into the course.

Credits	2
Degree Attributes	CLAS: (C) The Arts

MUSC 211: World Music

World Music is an exploration of Non-Western European music; 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.

Credits	4
Degree Attributes	CLAS: (C) The Arts AU: Global Perspective CoB: Humanities SoAD: Humanities-'Other'

MUSC 212: American Popular Music

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts CoB: Humanities

MUSC 213: Introduction to Jazz

This course examines the history of jazz music and considers the social reactions to the music and artists of the time

Credits	2
Degree Attributes	CLAS: (C) The Arts CoB: Humanities

MUSC 214: Reel Music in America

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)

Credits	4
Degree Attributes	CLAS: (C) The Arts CoB: Humanities

MUSC 215: History of Rock Music

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts CoB: Humanities

MUSC 216: Essentials of Mixing & Recording

This course provides a comprehensive introduction to the art and science of audio mixing and recording; blending theoretical knowledge with extensive hands-on experience. Students will explore the fundamentals of sound waves; acoustics; and psychoacoustics; while gaining practical skills in microphone techniques; digital audio workstations (DAWs); and signal processing. A strong emphasis is placed on real-world applications; with students actively participating in recording sessions featuring AU’s diverse ensembles; including the Orchestra; Pop Ensemble; Guzheng Ensemble; and Choir. (Fall)

Credits	4
Degree Attributes	CLAS: (C) The Arts
Semester Offered	Fall

MUSC 217: Introduction to Musicology & Ethnomusicology

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts CLAS: (E3) Soc Sci-Soc/Anth CoB: Humanities SoAD: Humanities-'Other'

MUSC 218: Musical Infrastructures

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.

Credits	2
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MUSC 219: Musical Reorientations:

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.

Credits	4
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MUSC 220: Music Theory II

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.

Credits	4
Degree Attributes	CoB: Humanities
Prerequisites	MUSC 120

MUSC 221: Musical Infrastructures

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; rethinking conventional notions music as affect; instead; grounding musical life within infrastructural reality. (Spring)

Credits	2
Degree Attributes	CLAS: (C) The Arts
Semester Offered	Spring

MUSC 225: Western Music History I

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts CoB: Humanities SoAD: Humanities-'Other'

MUSC 226: Music History II: Romanticism to the 20th Century

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts CoB: Humanities SoAD: Humanities-'Other'

MUSC 240: Songwriting and Composition

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 (Fall/Spring)

Credits	2
Degree Attributes	CLAS: (C) The Arts SoAD: Humanities-'Other'
Prerequisites	
MUSC 112 , MUSC 113	
Semester Offered	Fall/Spring

MUSC 271: University Chorus

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

Credits	2
Degree Attributes	CLAS: (C) The Arts

MUSC 272: Encore Choir

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts

MUSC 273: Concert Band

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts

MUSC 274: Jazz Ensemble

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts

MUSC 275: University Symphony Orchestra

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts

MUSC 278: Tenor/Bass Chorus

This course offers the opportunity to explore literature for 3 and 4 part tenor/bass vocal ensembles. This course introduces the basics of singing technique Basic music reading skills are also introduced. The chorus performs one concert on campus and one concert at a location off campus. Note: Ensembles may be repeated for credit to a maximum of 10 credit hours.

Credits	2
Degree Attributes	CLAS: (C) The Arts

MUSC 279: Chamber Music

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.

Credits	1-2
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MUSC 280: AU Popular Music Ensemble

The Alfred Popular Music Ensemble explores popular music from all genres/subgenres and eras utilizing socially informed and musically creative methods of performance. The ensemble is open to all types of performers including drummers; rappers; brass; bassists; synths; vocalists; keyboard players; guitarists; strings; etc. Music reading not required.

Credits	2
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MUSC 281: Laptop Ensemble

A dynamic collective merging of technology & music, this ensemble offers students a platform to explore innovative soundscapes. Each member (laptopist) assumes a distinct role in compositions, crafting sounds through recordings, MIDI, & music software. (Spring)

Credits	2
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MUSC 301: Private Lessons-Piano Advanced

Advanced study. One-hour lesson per week. Private lesson fee. Permission of instructor required.

Credits	2
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MUSC 302: Private Lessons-Voice Advanced

Advanced study. One-hour lesson per week. Private lesson fee. Permission of instructor required.

Credits	2
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MUSC 303: Private Lessons-Brass Advanced

Advanced study. One-hour lesson per week. Private lesson fee. Permission of instructor required.

Credits	2
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MUSC 304: Private Lessons-Woodwinds Advanced

Advanced study. One-hour lesson per week. Private lesson fee. Permission of instructor required.

Credits	2
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MUSC 305: Private Lessons-Strings Advanced

Advanced study. One-hour lesson per week. Private lesson fee. Permission of instructor required.

Credits	2
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MUSC 306: Private Lessons-Percussion Advanced

Advanced study. One-hour lesson per week. Private lesson fee. Permission of instructor required.

Credits	2
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MUSC 307: Private Lessons-Guitar Advanced

Advanced study. One-hour lesson per week. Private lesson fee. Permission of instructor required.

Credits	2
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MUSC 308: Private Lessons-Carillon Advanced

Advanced study. One-hour lesson per week. Private lesson fee. Permission of instructor required.

Credits	2
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MUSC 320: Music Theory III

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.

Credits	3
Prerequisites	
	MUSC 120 , MUSC 220

MUSC 332: Advanced Voice Class

A continuation of [MUSC 132](#). Continued work on vocal technique and expression with additional emphasis on singing in foreign languages (Italian and German diction). Students will learn and the use the IPA - the International Phonetic Alphabet.

Credits	2
Prerequisites	
	MUSC 132

MUSC 450: Independent Study

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.

Credits	1-4
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MUSC 495: Music Capstone-Research

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.

Credits	2
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MUSC 496: Music Capstone: Performance/ Presentation

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.

Credits	2
Prerequisites	MUSC 495

OCSST 301: Cultural Orientation Reflection and Engagement

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.

Credits	2
Degree Attributes	AU: Global Perspective

PDAT 120: Technical Theatre

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)

Credits	4
Degree Attributes	CLAS: (C) The Arts
Corequisites	PDAT 120L

PDAT 120L: Laboratory-Tech Theatre

Credits	0
Corequisites	PDAT 120

PDAT 200: Special Topics in Performance Design and Technology

Includes non-regularly scheduled course offerings in areas related to performance design and technology

Credits	1-4
Corequisites	PDAT 200L

PDAT 200L: Laboratory-Special Topics

Credits	0
Corequisites	
PDAT 200	

PDAT 220: Design Fundamentals for Stage Dance and Film

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts CoB: Humanities
Prerequisites	
PDAT 120	

PDAT 221: Making with Fabric

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts
Corequisites	
PDAT 221L	

PDAT 222: Stage Makeup

An introduction to the principles of designing and applying stage makeup. Projects and makeup crew assignments required. Offered during Fall

Credits	2
Degree Attributes	CLAS: (C) The Arts

PDAT 223: Sound Design and Technology

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts

PDAT 224: Entertainment Lighting: Electricity and Equipment

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.

Credits	2
Corequisites	
PDAT 224L	

PDAT 224L: Lab: Lighting & Multimedia Tec

Credits	0
Corequisites	
PDAT 224	

PDAT 225: Woodworking Techniques for the Stage

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.

Credits	2
Corequisites	
PDAT 225L	

PDAT 225L: Lab-Woodworking for the Stage

Credits	0
Corequisites	
	PDAT 225

PDAT 226: Scenic Painting

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts

PDAT 228: Costume Design for Dance

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts

PDAT 229: Transforming Fabric

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts
Corequisites	
	PDAT 229L

PDAT 229L: Transforming Fabric - Lab

Credits	0
Corequisites	
	PDAT 229

PDAT 231: Prop Design and Construction

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts

PDAT 270: Play Production

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.

Credits	2
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PDAT 271: Performance Design Practicum

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.

Credits	1
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PDAT 272: Performance Tech Practicum

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.

Credits	1
Prerequisites	
	For PDAT 272 =PDAT120 or 221

PDAT 273: Performance Mgmt. Practicum

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:

Credits	1
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PDAT 278: Costume Design - Practicum

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. (Spring)

Credits	1
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Prerequisites
PDAT 228

PDAT 300: Topics in Performance Des/Tech

Includes non-regularly scheduled course offerings in areas related to performance design and technology.

Credits	1-4
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PDAT 301: Puppetry: Art on a String

This course is an exploration of the world of puppetry. It will cover theory; application; and techniques behind the practice of puppet-making from across the globe. Course will culminate in a original short form puppetry performance. Offered Alternating Years

Credits	4
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PDAT 302: Computer Aided Theatrical Draf

Training in 2D and 3D computer aided drafting with Vectorworks and SketchUp Pro. Students will be able to create 3D models and draft 2D plates to communicate design and technical needs.

Credits	2
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PDAT 315: Advanced Design Seminar: Design is Dramaturgy

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.

Credits	2
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PDAT 320: Scene Design

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.

Credits	2
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Corequisites
PDAT 320L

PDAT 320L: Lab-Scene Design

Credits	0
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Corequisites
PDAT 320

PDAT 321: Lighting Design

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.

Credits	2
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Prerequisites
PDAT 224 , PDAT 220

PDAT 322: Costume Design

A costume focused design course which builds on the principles of design taught in [PDAT 220](#). It further develops skills in research methodology; script analysis; costume design theories; artistic processes; and costume construction for specific plays. Lab hours required.

Credits	2
Prerequisites	
	PDAT 220

PDAT 330: Costuming on the Half Scale

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.

Credits	4
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PDAT 340: Advanced Technical Practices

This course provides entertainment technician with the fundamentals of MIG welding; rigging; as well as technical production planning and budgeting. (Spring)

Credits	2
Prerequisites	
	PDAT 120 & 302 or ENGR 102
Semester Offered	Spring

PDAT 350: Independent Study

Academic inquiry into an area not covered in any established course; and carried on outside the usual instructor/classroom setting. Junior standing and an approved Plan of Study required.

Credits	1-4
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PDAT 370: Advanced Play Production

Advanced level continuation of [PDAT 270](#). May be repeated for credit up to a maximum of 6 credit hours.

Credits	2
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PDAT 371: Advanced Performance Design

Advanced level continuation of [PDAT 271](#). Students will be the lead designer on a production with faculty advising. Design areas: scenic, costume, lighting, projection & sound.

Credits	1-4
Prerequisites	
	PDAT 271

PDAT 372: Play Production-Lab

Advanced level continuation of [PDAT 272](#). A lab course where the student will be a crew head on a production or take on more advanced projects with faculty advising. Typically, through work in the costume, scene shop and theatres. May be repeated for credits to a maximum of 6 hours. (Every Term)

Credits	1-4
Semester Offered	Every Term

PDAT 373: Advanced Performance Management Practicum

This course is an experiential learning course that will allow students to further explore the areas of management and operations for performance by having them work on Division of Performing Arts productions. Students in this course will have both responsibilities to lead and collaborate as part of the production team as well as take on more advanced and challenging projects. (Every Term)

Credits	1-4
Semester Offered	Every Term

PDAT 385: Internship in Performance Design and Technology

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 required. Prerequisite: Junior standing; approval of instructor

Credits	1-4
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PDAT 450: Independent Study

Credits	1-4
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PDAT 470: Advanced Projects in Theatrical Design and Technology

This projects course is a faculty supervised experience for the advanced student in one of several areas of design: scenic; lighting; costume; sound; props; makeup; and technical direction.

Credits	1-4
Prerequisites	
PDAT 120 and 220; One of the following: PDAT 222; 320; 321; 322; 323	

PDAT 495: Senior Project

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. Prerequisites: senior standing; approved written proposal; permission of instructor.

Credits	4
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PERF 101: Core I: Making, Seeing, and Re

This course is part one of a two part first year curriculum for Performing Arts majors and those interested in Performing Arts. This team-taught course will expose students to a variety of theory and techniques through experiencing, making, seeing, and reflecting across the disciplines within the Performing Arts with a lens towards contemporary research and practice. (Fall)

Credits	4
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PERF 102: Core II: Making, Seeing, and Reflecting (Dance and Performance Design and Technology)

This course is part two of a two part first-year curriculum for Performing Arts majors and those interested in Performing Arts. The team-taught course will expose students to a variety of theory and techniques through experiencing, making, seeing, and reflecting across the disciplines within the Performing Arts with a lens towards contemporary research and practice.

Credits	4
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PERF 200: Special Topics PerformingArts

Special topics in Performing Arts. Topics vary from term to term.

Credits	1-4
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PERF 201: Living a Sustainable Life as a Professional Artist

This seminar course will explore the steps one needs to take to enter the professional world and live and sustain a creative life as an artist. The course will include the following resources: Text, live interviews with professional artists - emerging to established with ages their 20's - 70's; online sources including NYFA, Fractured U and Artists U; videos from authors/artist Andrew Simonet, and online skype discussion with Peter Cobb - NYFA consultant and co-author of "The Profitable Artist," and will be with the Career Development Center. During the course we will complete the workbook "How to Survive and Prosper as an Artist Workbook" as a class. We will explore a variety of issues that include but are not limited to professional art making/ performing, presenting creative research, budgeting, applying for residencies, creating strategic plans, exploring financial strategies to support yourself while working as an artist, time management, and collaboration strategies.

Credits	4
Prerequisites	
Must be junior or senior standing	
Semester Offered	Fall and Spring

PERF 230: Stage Management and the Art of Production Collaboration

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)

Credits	4
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PFIT 100: Special Topics

Offerings vary year to year depending on the availability of faculty with expertise in the particular physical fitness activity.

Credits	1
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)

PFIT 101: Cross Training

Combined weight training exercises and cardiovascular activities designed to improve strength; flexibility; cardiorespiratory fitness; and body composition.

Credits	1
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)

PFIT 103: Cardiovascular Fitness

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.

Credits	1
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)

PFIT 105: Beginning Badminton

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.

Credits	1
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)

PFIT 106: Beginning Pickleball

This course will teach the basics of pickleball. Students will learn the fundamental skills of the sport as well as rules and key strategies.

Credits	1
Degree Attributes	AU: Phys Fitness (Fall '19+)

PFIT 108: Introduction to Yoga

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.

Credits	1
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)

PFIT 110: Downhill Skiing

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.

Credits	1
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)

PFIT 112: Beginning Golf

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.

Credits	1
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)

PFIT 113: Snowboarding

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.

Credits	1
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)

PFIT 115: Total Fitness

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.

Credits	1
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)

PFIT 118: Weight Training

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.

Credits	1
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)

PFIT 122: Foster Lake Experience

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.

Credits	1
Degree Attributes	AU: Phys Fitness (Fall '19+)

PFIT 125: Karate

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.

Credits	1
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)

PFIT 128: Mindful Yoga

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.

Credits	2
Degree Attributes	AU: Phys Fitness (Fall '19+) AU: Wellness (Fall '19)

PFIT 129: Beginning/Intermediate Swimming

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.

Credits	1
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)

PFIT 130: Advanced Swimming

Advanced strokes and swimming skills are presented along with some racing and diving techniques.

Credits	1
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)
Prerequisites	
PFIT 129	

PFIT 131: Lifeguard Training

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.

Credits	1
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)
Prerequisites	
PFIT 130	

PFIT 133: Basic Tennis

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.

Credits	1
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)

PFIT 135: Tennis and Badminton

This course is designed to teach the basic fundamentals and how to effectively play the sports of tennis and badminton.

Credits	1
Degree Attributes	AU: Phys Fitness (Fall '19+)

PHIL 101: Introduction to Philosophy

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.

Credits	4
Degree Attributes	CLAS: (B) Philos/Relig Studies CoB: Humanities SoAD: Humanities

PHIL 105: Human Nature and the Cosmos: Western and non-Western Perspective

Discussions of human nature and the nature of the cosmos are central to the philosophies and world views of all cultures. This introductory philosophy course is based on this recognition. Students read selected sources on and from Europe; the Mediterranean; Asia; Africa and the Americas.

Credits	4
Degree Attributes	CLAS: (B) Philos/Relig Studies CoB: Humanities SoAD: Humanities

PHIL 202: The Meaning of Life

In this course we look at how various thinkers and philosophical schools have tried to answer questions about what makes life meaningful.

Credits	4
Degree Attributes	CLAS: (B) Philos/Relig Studies CoB: Humanities SoAD: Humanities

PHIL 281: Ethics

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.

Credits	4
Degree Attributes	CLAS: (B) Philos/Relig Studies CoB: Humanities SoAD: Humanities

PHIL 282: Introduction to Logic

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.

Credits	4
Degree Attributes	CLAS: (03) Quant Reasoning CoB: Humanities SoAD: Humanities

PHIL 283: Philosophy of the Arts I

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.

Credits	4
Degree Attributes	CLAS: (B) Philos/Relig Studies CoB: Humanities SoAD: Humanities

PHIL 300: Topics in Philosophy

Varying topics from year to year are selected from either the history of philosophy or contemporary philosophic problems. . (Sufficient demand)

Credits	1-4
Degree Attributes	CoB: Humanities SoAD: Humanities
Prerequisites	
Prerequisites vary depending on the topic	
Semester Offered	Sufficient demand

PHIL 304: Equality

Equality is a core concept in contemporary philosophy and in discussions of social justice generally. In this course we discuss different kinds of equality: equality of opportunity; racial equality; sexual equality and political equality. Previous coursework in political science or philosophy is desirable but not required.

Credits	2
Degree Attributes	CoB: Humanities SoAD: Humanities
Crosslisted	
POLS 304 , SJST 304	

PHIL 305: Chinese Philosophy

What is virtue? Does good government flow from the character of leaders or is strict law enforcement all that is required? Alternatively; does our concern with society and government distract us from more important things? Is the concern for enlightenment inherently selfish? Readings in classical and more recent Chinese philosophy will help us grapple with these questions.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities
Prerequisites	
Any PHIL or RLGS course	

PHIL 306: Personal Identity and the Self

What constitutes a person’s identity and what is the self? Does being the same person over time mean having the same body or is psychological continuity required? If it is psychological; then is it acquired and can it be lost? Finally; is there a self? What we learn from medical science; psychology and philosophy are brought together in this discussion.

Credits	2
Degree Attributes	CoB: Humanities SoAD: Humanities
Prerequisites	
Any PHIL or PSYC course	

PHIL 310: Animal Consciousness

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.

Credits	2-4
Degree Attributes	CoB: Humanities SoAD: Humanities
Prerequisites	
Any PHIL course	

PHIL 311: Greek Philosophy

This course covers the history of Greek philosophy from the Presocratic through the Hellenistic period. Special emphasis is given to Plato and to Aristotle.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities
Crosslisted	
POLS 311	

PHIL 312: Philosophical Foundations of Modernity

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.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities

PHIL 329: Revolution and Culture: Hegel Marx Nietzsche

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.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities
Crosslisted	HIST 329 ; POLS 329

PHIL 341: Modern Political Theory

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.

Credits	4
Degree Attributes	CoB: Social Science SoAD: Humanities
Crosslisted	POLS 341 ; SJST 341

PHIL 383: Philosophy of the Arts II

Continued study of the question of meaning in art emphasizing the problem of interpretation. Models for criticism and contemporary debates about postmodern culture are examined. Topics include the relativity of interpretations; the role of styles and traditions; and the relationship of different artistic media to each other. (Sufficient demand)

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities
Prerequisites	PHIL 283
Semester Offered	Sufficient demand

PHIL 388: Topics in Metaphysics

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? (Sufficient Demand)

Credits	2-4
Degree Attributes	CoB: Humanities SoAD: Humanities
Prerequisites	Any PHIL course
Semester Offered	Sufficient demand

PHIL 390: Social and Political Philosophy Topics

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.

Credits	2-4
Degree Attributes	CoB: Humanities SoAD: Humanities
Prerequisites	Any PHIL course

PHIL 400: Topics in Philosophy

Varying topics from year to year are selected from either the history of philosophy or contemporary philosophic problems. (Sufficient demand)

Credits	1-4
Degree Attributes	CoB: Humanities SoAD: Humanities
Prerequisites	
Prerequisites vary depending on the topic.	
Semester Offered	Sufficient demand

PHIL 450: Independent Study

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.

Credits	1-4
Degree Attributes	SoAD: Humanities

PHYS 111: Introductory General Physics I

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.

Credits	4
Degree Attributes	CLAS: (F-I) Scientific Inquiry CLAS: (F1) Nat Sci w/Lab CoB: Natural Science
Corequisites	
PHYS 111L	

PHYS 111L: Laboratory-Intro Gen Phys I

Credits	0
Corequisites	
PHYS 111	

PHYS 112: Introductory General Physics II

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.

Credits	4
Degree Attributes	CLAS: (F-I) Scientific Inquiry CLAS: (F1) Nat Sci w/Lab CoB: Natural Science
Prerequisites	
PHYS 111 or 125	
Corequisites	
PHYS 112L	

PHYS 112L: Laboratory-Intro Gen Phys II

Credits	0
Corequisites	
PHYS 112	

PHYS 125: Physics I

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.

Credits	4
Degree Attributes	CLAS: (F-I) Scientific Inquiry CLAS: (F1) Nat Sci w/Lab CoB: Natural Science
Prerequisites	
MATH 151	
Corequisites	
PHYS 125L	

PHYS 125L: Laboratory-Physics I

Credits	0
Corequisites	
PHYS 125	

PHYS 126: Physics II

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.

Credits	4
Degree Attributes	CLAS: (F-I) Scientific Inquiry CLAS: (F1) Nat Sci w/Lab CoB: Natural Science
Prerequisites	MATH 152 , PHYS 125
Corequisites	PHYS 126L

PHYS 126L: Laboratory-Physics II

Credits	0
Corequisites	PHYS 126

PHYS 200: Special Topics in Physics

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)

Credits	1-4
Semester Offered	Sufficient demand

PHYS 201: Computing in the Physical Sciences

In this course students apply computer programming; logic; and/or modeling software to physical problems. Depending on the instructor or semester; various languages or modeling packages will be used. The emphasis is on the flow of logic and on how computers can be used to answer questions that cannot be answered in other ways.

Credits	3
Prerequisites	PHYS 125 , PHYS 126

PHYS 324: Mathematical Methods in Physics

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.

Credits	3
Prerequisites	MATH 253 , PHYS 126

PHYS 325: Elementary Optics

This course discusses geometrical and wave optics with special emphasis on optical instruments.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	MATH 253 , PHYS 126

PHYS 326: Elementary Modern Physics

This course includes basic relativity; quantum and waves aspects of radiation and particles; atomic structure; and an introduction to nuclear physics properties.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
MATH 253 , PHYS 126	

PHYS 327: Computational Physics

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.

Credits	3
Prerequisites	
PHYS 326 or 344	

PHYS 341: Advanced Physics Laboratory

A laboratory course involving experiments in mechanics; acoustics; heat; optics; electricity and magnetism; electronics and atomic and nuclear physics.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
PHYS 126	

PHYS 400: Special Topics

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)

Credits	1-4
Semester Offered	Sufficient demand

PHYS 401: Quantum Mechanics I

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.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
PHYS 324 , PHYS 326	

PHYS 402: Quantum Mechanics II

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.

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
MATH 371 , PHYS 401	
Crosslisted	
CEMS 507	

PHYS 405: General Relativity

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.

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	
PHYS 326	

PHYS 408: Physics of Glass

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. (Offered on demand)

Credits	4
Prerequisites	
	MATH 271 , PHYS 125 , PHYS 126
Semester Offered	Offered on demand

PHYS 410: Particle Physics

Local gauge invariance is applied to the quantum theories of electrodynamics; strong; and weak V-A interactions. The Feynman rules and diagrams for these interactions are developed with a strong emphasis placed on the calculation of cross sections. The unification of electromagnetism and weak interactions into electroweak theory is developed and used to calculate cross sections. The important role that spontaneous symmetry breaking and the Higg's mechanism play in particle physics is developed in detail.

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	
	PHYS 401

PHYS 415: Nonlinear Dynamics & Chaos

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.

Credits	3
Prerequisites	
	MATH 271 , PHYS 126

PHYS 421: Statistical Mechanics

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. (Offered on demand)

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	
	MATH 253 , PHYS 126
Semester Offered	Offered on demand

PHYS 423: Classical Mechanics

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. (Offered on demand)

Credits	4
Degree Attributes	CoB: Natural Science
Prerequisites	
	PHYS 126 , PHYS 324
Semester Offered	Offered on demand

PHYS 424: Electricity and Magnetism I

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. (Offered on demand)

Credits	3
Degree Attributes	CoB: Natural Science
Prerequisites	
	PHYS 126 , PHYS 324
Semester Offered	Offered on demand

PHYS 450: Independent Study

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.

Credits	1-4
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PHYS 454: Electricity & Magnetism II

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. (Offered on demand)

Credits	3
Prerequisites	
	PHYS 326 , PHYS 424
Semester Offered	Offered on demand

POLS 110: American Politics

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.

Credits	4
Degree Attributes	CLAS: (E2) Soc Sci-Pols/Econ CoB: Social Science SoAD: Humanities-'Other'

POLS 150: World Politics

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.

Credits	4
Degree Attributes	CLAS: (E2) Soc Sci-Pols/Econ AU: Global Perspective CoB: Social Science SoAD: Humanities-'Other'

POLS 200: Special Topics

Examines topics of special interest not normally covered in other political science courses. Examples are Biopolitics; Political Socialization. (Sufficient demand)

Credits	1-4
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POLS 214: Environment Politics and Society

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.

Credits	4
Degree Attributes	CoB: Social Science
Crosslisted	
	ENVS 214 ; SOCI 214

POLS 229: Social Science Inquiry

This course aims to introduce students to how to research society. Students examine different research approaches (both qualitative and quantitative); learn how to read/ understand published research; demonstrate an understanding of various research approaches; and understand; interpret; and critically analyze published research on social and political phenomena.

Credits	4
Prerequisites	
	POLS 110 or 150 or SOCI 110

POLS 230: Introduction to Data Analysis and Statistics

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.

Credits	4
Degree Attributes	CLAS: (03) Quant Reasoning CoB: Quant Reasoning
Crosslisted	
	SOCI 230

POLS 232: Judicial Processes

The theory and practice of judicatory systems with primary emphasis on Anglo-American judicial processes and problems.

Credits	4
Degree Attributes	CoB: Social Science

POLS 237: Media and Politics

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.

Credits	4
Degree Attributes	CoB: Social Science
Crosslisted	
	COMM 237 ; SOCI 237

POLS 242: Approaches to Law

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.

Credits	4
Degree Attributes	CoB: Social Science

POLS 253: Dictatorship and Democracy

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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Social Science

POLS 271: World Politics

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.

Credits	4
Degree Attributes	CLAS: (E2) Soc Sci-Pols/Econ AU: Global Perspective CoB: Social Science SoAD: Humanities-'Other'

POLS 300: Special Topics

Examines topics of special interest not normally covered in other political science courses. Examples are Biopolitics; Political Socialization. (Sufficient demand)

Credits	1-4
Degree Attributes	CoB: Social Science
Semester Offered	Sufficient demand

POLS 304: Equality

Equality is a core concept in contemporary philosophy and in discussions of social justice generally. In this course we discuss different kinds of equality: equality of opportunity; racial equality; sexual equality and political equality. Previous coursework in political science or philosophy is desirable but not required.

Credits	2
Degree Attributes	CoB: Humanities
Crosslisted	
PHIL 304 , SJST 304	

POLS 310: Executive Branch Institutions

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. (Every third semester.)

Credits	4
Prerequisites	
POLS 110	
Semester Offered	Every Third Semester

POLS 313: State and Local Politics

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)

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
POLS 110	
Semester Offered	Alternate Years

POLS 316: American Constitutional Law and Politics

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
POLS 110	

POLS 318: The Presidency

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](#).

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
POLS 110	

POLS 321: The History of Fascism

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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Humanities
Crosslisted	
HIST 321	

POLS 329: Revolution and Culture: Hegel Marx Nietzsche

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.

Credits	4
Degree Attributes	CoB: Humanities
Crosslisted	
HIST 329 ; PHIL 329	

POLS 331: Parties and Elections

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
POLS 110	

POLS 332: Judicial Processes

The theory and practice of judicatory systems with primary emphasis on Anglo-American judicial processes and problems.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
POLS 110 , SOCI245 / CRIM 245	

POLS 341: Modern Political Theory

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.

Credits	4
Degree Attributes	CoB: Social Science
Crosslisted	
PHIL 341 ; SJST 341	

POLS 346: American Political Thought

This course introduces students to political thought in the United States. It explores liberal ideals such as individualism; freedom; equality; citizenship; and democracy; as well as important alternatives to those ideas. It will also examine the ways in which race; ethnicity; and gender have shaped American political thought.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
POLS 110	

POLS 351: European Politics

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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Social Science
Crosslisted	
GLBS 351	

POLS 354: History and Politics of the Middle East

This course offers an exploration of the ways in which two sets of transnational forces have together shaped the politics of the Middle East over the past four decades: A) the resurgence of “political Islam” within the wider Muslim world and B) the increasingly complex and direct intervention of the United States and other external powers in the region. Focal points include legacies of regional empires (Islamic; Ottoman; Safavid; etc.) and of European colonialism; the evolution of the Israeli-Arab/Palestinian conflict; the Iranian Revolution; Sunni-Shiite sectarian tensions/rivalries (centered around a Saudi-Iranian fulcrum since 1979); Iraq’s recurrent slides toward war; the anti-authoritarian struggles of the Arab Spring (particularly in Tunisia and Egypt); Syria’s violent fragmentation (including the rise of ISIS as well as a wide array of outside interventions by self-serving nation-states) and 21st-century Turkey under Erdogan’s “moderate” version of political Islam. Along the way we will endeavor to identify and to appreciate both key overarching patterns that are widely shared throughout the Middle East and important differences that mark the region’s distinct national and sub-national communities.

Credits	4
Degree Attributes	AU: Global Perspective

POLS 355: Public Policy

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
POLS 110	

POLS 356: Social Movements

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?

Credits	4
Degree Attributes	CoB: Social Science
Crosslisted	
SJST 356 ; SOCI 356	

POLS 373: Terrorism and International Security

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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Social Science

POLS 382: Latin American Politics

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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Social Science
Crosslisted	
HIST 382	

POLS 400: Special Topics

Credits	1-4
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POLS 411: Bureaucracy

Analysis of the administrative policy processes at the national level. Internal interaction and budgetary processes as well as interchange with external governmental and political institutions. (Alternate years)

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
POLS 110	
Semester Offered	Alternate Years

POLS 417: American Civil Liberties

Analysis of such current legal and political issues as free speech; religion; poverty; privacy; obscenity; and racial and sexual discrimination with attention to both established and latent areas of concern. Focuses on Supreme Court activity. Other governmental action considered; along with the theoretical and social contexts of the problems examined. junior or senior standing.

Credits	2
Degree Attributes	CoB: Social Science

POLS 420: Social Theory: A Survey

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. (Offered Fall; odd years)

Credits	4
Degree Attributes	CoB: Social Science
Semester Offered	Offered Fall; odd years

POLS 431: Research Design and Strategies

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
SOCI 230 or POLS 230	

POLS 442: Western Legal Thought

This course introduces students to the ideas that inform United States law and legal institutions. We examine questions such as what is the law and why do we obey it; what authority stands behind law; and how do our answers influence the way we make and interpret law?

Credits	4
Prerequisites	
POLS 110	

POLS 450: Independent Study

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.

Credits	1-4
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POLS 470: Field Work

Supervised on-site field work on an approved topic.
Prerequisites: Junior/senior standing; minimum 2.5 overall GPA and permission of instructor.

Credits	2-4
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PSYC 101: Introduction to Psychology

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.

Credits	4
Degree Attributes	CLAS: (E1) Social Sci-Psyc CoB: Social Science

PSYC 118: Introduction to Adult Development and Aging

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.

Credits	4
Degree Attributes	CLAS: (E1) Social Sci-Psyc CoB: Social Science
Crosslisted	
GERO 118 ; SJST 118	

PSYC 120: Human Lifespan Development

This course examines the physical; cognitive; social; and emotional changes humans experience throughout their lives; from conception to death; exploring key theories; research methods; and factors that influence development across different stages; including biological; environmental; and cultural influences; with a focus on understanding how these aspects interact to shape a person's life journey.
(Summer/Allen)

Credits	4
Semester Offered	Summer/Allen

PSYC 200: Special Topics

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.

Credits	1-4
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PSYC 210: Communication and Counseling Skills

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.

Credits	2
Degree Attributes	CoB: Social Science
Prerequisites	
PSYC 101 or GERO 118	

PSYC 220: Psychological Methods and Statistics

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.

Credits	4
Degree Attributes	CLAS: (03) Quant Reasoning CoB: Quant Reasoning
Prerequisites	
PSYC 101	

PSYC 221: Psychological Research Methods and Statistics I

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.

Credits	4
Degree Attributes	CLAS: (03) Quant Reasoning CoB: Quant Reasoning
Prerequisites	
PSYC 101	

PSYC 222: Psychological Research Methods and Statistics II

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.

Credits	4
Degree Attributes	CLAS: (03) Quant Reasoning
Prerequisites	
PSYC 101 & 221	

PSYC 230: Psychological Research and Design I

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](#).

Credits	2
Degree Attributes	CoB: Social Science
Prerequisites	
PSYC 220	

PSYC 251: Principles of Learning and Behavior Modification

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.

Credits	4
Degree Attributes	CoB: Social Science AU: Wellness (Fall '19)
Prerequisites	PSYC 101

PSYC 261: Cognitive Development

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	PSYC 101

PSYC 262: Social Development

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	PSYC 101

PSYC 263: Infant & Child Development

This course examines physical; cognitive; social; and emotional development from infancy through childhood. It will explore developmental theories; research; and practical applications to understand and support children's growth within family; cultural; and societal contexts. (Fall; Allen term; Spring and Summer term on rotation)

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	PSYC 101
Semester Offered	Fall; Allen term; Spring and Summer term on rotation

PSYC 264: Adolescent & Young Adult Development

This course examines physical; cognitive; social; and emotional development from adolescence through early adulthood. It will explore developmental theories; research; and practical applications to understand and support teen and young adult growth within family; cultural; and societal contexts.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	PSYC 101

PSYC 270: Fundamentals of Neuropsychology

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. . Note open to students who have taken [PSYC 330](#) (Fall/Spring)

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	PSYC 101
Semester Offered	Fall/Spring

PSYC 273: Psychology of the African American Experience

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. (Spring)

Credits	2-4
Semester Offered	Spring

PSYC 280: Applied Neuropsychology

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. (Fall/Spring)

Credits	2-4
Degree Attributes	CoB: Social Science
Prerequisites	PSYC 101 , PSYC 270
Semester Offered	Fall/Spring

PSYC 282: Social Psychology

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	PSYC 101

PSYC 300: Special Topics

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.

Credits	1-4
Degree Attributes	CoB: Social Science

PSYC 302: Psychological Measurement

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.

Credits	2-4
Degree Attributes	CoB: Social Science
Prerequisites	PSYC 101 & 221

PSYC 306: Personal Identity and the Self

What constitutes a person’s identity and what is the self? Does being the same person over time mean having the same body or is psychological continuity required? If it is psychological; then is it acquired and can it be lost? Finally; is there a self? What we learn from medical science; psychology and philosophy are brought together in this discussion. Prerequisite: previous course work in philosophy; psychology or permission of the instructor.

Credits	2
Degree Attributes	CoB: Humanities
Prerequisites	Any PHIL or PSYC course

PSYC 310: Professional Preparation in Psychology

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.

Credits	2
Degree Attributes	CoB: Social Science
Prerequisites	
PSYC 101	

PSYC 311: Sensation and Perception

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](#).

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
PSYC 101	

PSYC 320: Parenting Seminar

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.

Credits	2-3
Degree Attributes	CoB: Social Science
Prerequisites	
PSYC 101	

PSYC 322: Health Psychology

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.

Credits	2-4
Degree Attributes	CoB: Social Science AU: Wellness (Fall '19)
Prerequisites	
PSYC 101	

PSYC 330: Neuropsychology

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.

Credits	4
Degree Attributes	CoB: Social Science

PSYC 331: Counseling substance use and addictions

This course is an introduction; and an examination of counseling substance use and other addictions. It will focus on the treatment of a wide variety of addictions. Topics include counseling; neurobiology; adolescents and family issues; pregnancy; trauma; and substance abuse prevention; and abuse of drugs today. This course emphasizes counseling and treatment for substance use and the impact of biological; sociological; psychological; and environmental factors on substance use. (Fall)

Credits	4
Prerequisites	
PSYC 101 , Psyc 210	
Semester Offered	Fall

PSYC 332: Cognitive Processes

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
PSYC 101	

PSYC 340: Adverse & Protective Childhood

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.* 1 (Fall/Spring)

Credits	2-3
Prerequisites	
PSYC 101	
Semester Offered	Fall/Spring

PSYC 341: Theories of Personality

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
PSYC 101	

PSYC 342: Psychopathology

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
PSYC 101	

PSYC 343: Child & Adolescent Mental Health

This course focuses on advocacy and support of children and adolescents who experience psychological difficulties. Students will examine etiology; characteristics and features; as well as interventions for mental health challenges commonly experienced among youth. This course will also explore the practices and strategies used to support children experiencing developmental delays or disabilities during their early years; focusing on identifying needs; implementing targeted interventions; and collaborating with families to promote optimal development across cognitive; physical; social; and emotional domains; within a framework of childhood development theories. Students will explore theoretical and practical perspectives through a variety of applied tasks. (Fall; Allen; Spring; Summer terms on rotation)

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
PSYC 101 or 120 AND PSYC 261 or 262 or 263 or 264	
Semester Offered	Fall; Allen; Spring; Summer terms on rotation

PSYC 351: Human Sexuality

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.

Credits	4
Degree Attributes	CoB: Social Science AU: Wellness (Fall '19)
Crosslisted	
WGST 351	

PSYC 360: Topics

Credits	2
Degree Attributes	CoB: Humanities

PSYC 362: Industrial/Organizational Psychology

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
PSYC 101	

PSYC 371: The Psychology of Death and Dying

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
PSYC 101	

PSYC 372: Psychology of Gender

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
PSYC 101	

PSYC 381: Animal-Assisted Therapy

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.

Credits	3
Prerequisites	
PSYC 101 , Psyc 210	

PSYC 382: Equine-Assit. Psychotherapy

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.

Credits	3
Prerequisites	
PSYC 101 , Psyc 210, PSYC 381	

PSYC 389: Introduction to Art Therapy

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.

Credits	3
Degree Attributes	CoB: Social Science
Prerequisites	
PSYC 101 ; PSYC 342 and either PSYC 261 or 262 recommended	

PSYC 400

PSYC 411: Advanced Psychological Research Methods and Statistics

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
PSYC 220 and 230	

PSYC 412: Research Practicum

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
PSYC 411	

PSYC 429: Cognition and Aging

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. Recommended: [PSYC 332](#) or GERO 272 or permission of instructor. (Alternate years)

Credits	2
Degree Attributes	CoB: Social Science
Prerequisites	
PSYC 101	
Semester Offered	Alternate Years

PSYC 450: Independent Study

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.

Credits	1-4
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PSYC 471: Child Psychopathology

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.

Credits	3
Degree Attributes	CoB: Social Science
Prerequisites	
1 of: PSYC 261 , 262, 342	

PSYC 472: Child Interventions

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).

Credits	3
Degree Attributes	CoB: Social Science
Prerequisites	
1 of: PSYC 262 , 262, 342	

PSYC 477: Child and Adolescent Psychopathology

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
1 of: PSYC 261 , 262, 342	

PSYC 485: Practicum

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. Prerequisites: [PSYC 101](#) and permission of instructor.

Credits	2-4
Degree Attributes	CoB: Social Science
Prerequisites	
	PSYC 101

PSYC 491: Clinical Procedures

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
	PSYC 210 or 341 or 342 + perm

PSYC 492: Clinical Practicum

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
	PSYC 491

PSYC 497: Senior Seminar

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.

Credits	2
Prerequisites	
	20 credit hours of Psychology

RLGS 105: Introduction to Religions of the World

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.

Credits	4
Degree Attributes	CLAS: (B) Philos/Relig Studies AU: Global Perspective CoB: Humanities SoAD: Humanities

RLGS 165: Asian Religions

An introduction to selected Asian religious traditions (e.g.; Hindu; Buddhist; Sikh; Shinto; Confucian; Daoist); with attention to their historical and contemporary contexts.

Credits	4
Degree Attributes	CLAS: (B) Philos/Relig Studies AU: Global Perspective CoB: Humanities SoAD: Humanities

RLGS 200: Topics in Religious Studies

An examination of issues in religious studies. Topics vary each time the course is offered. (Sufficient demand)

Credits	1-4
Degree Attributes	SoAD: Humanities

RLGS 240: Religion in America

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)

Credits	4
Degree Attributes	CLAS: (B) Philos/Relig Studies CoB: Humanities SoAD: Humanities

RLGS 252: Judaism and Islam

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)

Credits	4
Degree Attributes	CLAS: (B) Philos/Relig Studies AU: Global Perspective SoAD: Humanities

RLGS 254: Birth of the Christian Tradition

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. (On demand)

Credits	4
Degree Attributes	CLAS: (B) Philos/Relig Studies SoAD: Humanities
Semester Offered	On demand

RLGS 274: Hindu Religious Traditions

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.

Credits	4
Degree Attributes	CLAS: (B) Philos/Relig Studies AU: Global Perspective CoB: Humanities SoAD: Humanities
Semester Offered	Sufficient demand

RLGS 300: Topics in Religious Studies

An examination of issues in religious studies. Topics vary each time the course is offered. (Sufficient demand)

Credits	1-4
Degree Attributes	SoAD: Humanities

RLGS 307: Myth Ritual and the Creative Process

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. *(Alternate years)

Credits	4
Degree Attributes	SoAD: Humanities
Prerequisites	
Any PHIL or RLGS course	
Semester Offered	Alternate Years

RLGS 450: Independent Study

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.

Credits	1-4
Degree Attributes	SoAD: Humanities

RNEW 200: Special Topics

Credits	1-3
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RNEW 201: Renewable Energy

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](#).

Credits	3
Prerequisites	MATH 152

RNEW 255: Power System Operation and Economics

This course covers power system operation; generation scheduling; and trading. The idea is to minimize the total operation cost of a power system subject to power balance and other constraints. Different minimization methods are covered and the coordination between thermal and renewable generation are discussed.

Credits	3
Prerequisites	MATH 151 , MATH 152

RNEW 303: Software Engineering

Software engineering concepts and techniques; structured design and modular construction; fundamentals of programming style; high level language programming; error detection and error location techniques.

Credits	4
Corequisites	RNEW 303L

RNEW 303L: Laboratory-Software Engr

Credits	0
Corequisites	RNEW 303

RNEW 310: Fuel Cell Principles and Technology

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.

Credits	3
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RNEW 320: Circuit Theory II

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.

Credits	4
Prerequisites	ENGR 220 or ELEC 220
Corequisites	RNEW 320L

RNEW 320L: Laboratory-Circuit Theory II

Credits	0
Corequisites	RNEW 320

RNEW 322: Signals and Systems

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.

Credits	3
Prerequisites	ENGR 220 (formerly ELEC 220)

RNEW 355: Power System Operation and Economics

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.

Credits	3
Prerequisites	
ENGR 220 , MATH 253 , MATH 271 , RNEW320	

RNEW 400: Special Topics

Special topics in renewable energy engineering which vary from year to year.

Credits	1-3
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RNEW 410: Advanced Power Systems

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.

Credits	3
Prerequisites	
For RNEW 410/510	

RNEW 431: Wind Energy

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. Prerequisites: [MATH 152](#) and [PHYS 126](#).

Credits	3
Prerequisites	
MATH 152 , PHYS 126	

RNEW 432: Solar Energy Systems

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.

Credits	3
Prerequisites	
MECH 320	

RNEW 450: Independent Study

Credits	1-4
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RNEW 461: Power Electronics for Renewable Systems

This course is an introduction to power electronics with emphasis on applications such as energy conservation and renewable energy. Topics include introductory switching devices; devices for power electronics; and converter design and simulation. Basic concepts of DC-DC converters in continuous and discontinuous modes are included; along with design for motor drives and transformer-isolated switch-mode power supplies.

Credits	3
Prerequisites	
ENGR 220 (formerly ELEC 220)	

RNEW 468: Electric Machinery

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.

Credits	3
Prerequisites	
ENGR 220 (formerly ELEC 220)	
Crosslisted	
ELEC 574	

RNEW 490: Engineering Design Methods

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.

Credits	2
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RNEW 496: Senior Design Project

The student develops an original individual design project with a faculty advisor from conception to design; construction and testing. A complete report is required.

Credits	4
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SCIE 110: Weather Elements

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)

Credits	2
Degree Attributes	CLAS: (F-III) Science/Society CLAS: (F2) Nat Sci-no Lab CoB: Natural Science
Semester Offered	Sufficient demand

SCIE 111: Science in Science Fiction

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.

Credits	2-4
Degree Attributes	CLAS: (F-III) Science/Society CLAS: (F2) Nat Sci-no Lab CoB: Natural Science

SCIE 115: Life in the Universe

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.

Credits	4
Degree Attributes	CLAS: (F-III) Science/Society CLAS: (F2) Nat Sci-no Lab CoB: Natural Science

SCIE 117: Integrated Science

Content-based survey of the Physical Setting Core Curriculum for Elementary (K-4) and Intermediate (5-8) Level Science; emphasizing the chemical and physical laws that describe our surroundings and the interactions of inanimate environmental components. Illustrates chemistry and physics concepts with real-world examples and links them with earth science; numeracy; and art as reinforced by the associated inquiry-based laboratory addressing the complementary Process Skills. Includes modern methods of acquiring; analyzing; modeling/interpreting; and communicating data from the physical sciences. Manipulatives; models; and experiments for understanding physical properties and chemical structure are featured in the hands-on laboratory. Prerequisite: Major or minor in education; others by permission of instructor.

Credits	4
Degree Attributes	CLAS: (F1) Nat Sci w/Lab CoB: Natural Science

SCIE 127: Doing Science

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.

Credits	4
Degree Attributes	CLAS: (03) Quant Reasoning CLAS: (F-I) Scientific Inquiry CLAS: (F1) Nat Sci w/Lab CoB: Natural Science

SCIE 200: Special Topics in Science

Topics vary from year to year.

Credits	1-4
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SCIE 450: Independent Study

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.

Credits	1-4
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SIGN 101: American Sign Language

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.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities

SIGN 102: American Sign Language II

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.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities
Prerequisites	SIGN 101

SJST 100: Special Topics in Social Justice Studies

In this course topics in Social Justice Studies are explored. Topics vary from term to term.

Credits	1-4
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SJST 101: Introduction to Social Justice Studies

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.)

Credits	4
Degree Attributes	CoB: Social Science

SJST 110: Introduction to Sociology

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.

Credits	4
Degree Attributes	CLAS: (E3) Soc Sci-Soc/Anth CoB: Social Science SoAD: Humanities-'Other'
Crosslisted	
SOCI 110	

SJST 115: Concepts of Service Learning

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.

Credits	2
Degree Attributes	CoB: Social Science AU: Service Learning Courses
Crosslisted	
UNIV 115	

SJST 118: Introduction to Adult Development and Aging

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.

Credits	4
Degree Attributes	CLAS: (E1) Social Sci-Psyc CoB: Social Science
Crosslisted	
GERO 118 ; PSYC 118	

SJST 200: Special Topics in SJST

In this course topics in Social Justice Studies are explored. Topics vary from term to term.

Credits	1-4
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SJST 201: Women and Gender in Society

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.

Credits	4
Degree Attributes	CoB: Social Science SoAD: Humanities-'Other'
Crosslisted	
WGST 101	

SJST 205: Information and Society

This course will give students a foothold in our rapidly shifting information landscape by introducing a framework for information literacy and exploring the role of information in society; covering topics like misinformation; artificial intelligence; paywalls; and personal data. Upon completing this course; students will be equipped with the knowledge; tools; and strategies necessary to exist as an informed and ethical person in the 21st century. (Bi Annually).

Credits	2
Crosslisted	
LIBR 205/HIST 205	
Semester Offered	Bi Annually

SJST 208: Francophone Queer Voices

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.

Credits	4
Degree Attributes	CLAS: (A) Literature AU: Global Perspective

SJST 213: Speaking the Unspeakable: Argentina's Literature of Dictatorship

This course introduces literary representations of state violence and resistance during the Argentine military dictatorship of the 1970s and 1980s. We engage in close readings of a variety of literary genres; including novels; short stories; autobiography; and testimonial literature. We combine literary readings with study of historical and theoretical texts in order to deepen our understanding of state terrorism; resistance; trauma; memory; and justice. The course is conducted in English; including the readings and films.

Credits	4
Degree Attributes	CLAS: (A) Literature AU: Global Perspective CoB: Social Science
Crosslisted	
GLSB 213, SPAN 213	

SJST 216: Queering the Pitch

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

Credits	2
Degree Attributes	CLAS: (C) The Arts CoB: Humanities

SJST 217: Exiled from Justice: Equatorial Guinean Writers in Africa and Spain

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.

Credits	4
Degree Attributes	CLAS: (A) Literature AU: Global Perspective CoB: Humanities
Crosslisted	
SPAN 217	

SJST 222: The Harlem Renaissance

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.

Credits	4
Degree Attributes	CLAS: (A) Literature
Crosslisted	
ENGL 222	

SJST 226: The Holocaust and Literature

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.

Credits	4
Degree Attributes	CLAS: (A) Literature AU: Global Perspective CoB: Humanities
Crosslisted	
ENGL 226	

SJST 242: Approaches to Law

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.

Credits	4
Degree Attributes	CoB: Social Science

SJST 254: Women Writers

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.

Credits	2-4
Degree Attributes	CLAS: (A) Literature SoAD: Humanities-'Other'
Crosslisted	
ENGL 254 ; WGST 254	

SJST 256: Multicultural American Literature

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.

Credits	4
Degree Attributes	CLAS: (A) Literature CoB: Humanities SoAD: Humanities-'Other'
Crosslisted	ENGL 256 ; WGST 256

SJST 282: Social Psychology

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	PSYC 101

SJST 294: Art Force 5: Social Justice Research Design Outreach

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. (Fall/Spring)

Credits	2
Crosslisted	ART 294
Semester Offered	Fall/Spring

SJST 300: Special Topics in Social Justice Studies

In this course topics in Social Justice Studies are explored. Topics vary from term to term.

Credits	1-4
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SJST 304: Equality

Equality is a core concept in contemporary philosophy and in discussions of social justice generally. In this course we discuss different kinds of equality: equality of opportunity; racial equality; sexual equality and political equality. Previous coursework in political science or philosophy is desirable but not required.

Credits	2
Degree Attributes	CoB: Humanities
Crosslisted	PHIL 304 , POLS 304

SJST 307: Post-World War II America

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.

Credits	4
Crosslisted	HIST 307

SJST 316: American Constitutional Law and Politics

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
POLS 110	

SJST 336: American Political Thought

This course introduces students to political thought in the United States. It explores liberal ideals such as individualism; freedom; equality; citizenship; and democracy; as well as important alternatives to those ideas. It will also examine the ways in which race; ethnicity; and gender have shaped American political thought.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
POLS 110	

SJST 340: Concepts of Penology

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
SOCI/ SJST 110 , SOC 245	

SJST 341: Modern Political Theory

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.

Credits	4
Degree Attributes	CoB: Social Science
Crosslisted	
PHIL 341 ; POLS 341	

SJST 344: Sociology of Deviance & Criminal Behavior

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
SOCI 110 or ANTH 110	

SJST 346: Sociology of Sex and Gender

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
SOCI 110 or ANTH 110	
Crosslisted	
SOCI 346 ; WGST 346	

SJST 349: Sociology of Health Illness & Dis/ability

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.

Credits	4
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SJST 355: Power Privilege and Inequality

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.

Credits	4
Prerequisites	SOC 110 or ANTH 110

SJST 356: Social Movements

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?

Credits	4
Degree Attributes	CoB: Social Science
Crosslisted	POLS 356 ; SOCI 356

SJST 360: Special Topics in Social Justice Studies

In this course topics in Social Justice Studies are explored. Topics vary from term to term.

Credits	1-4
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SJST 372: Psychology of Gender

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	PSYC 101

SJST 382: Gender and Art History: Feminist Art in a Global Frame

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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Humanities
Crosslisted	ARTH 382 ; WGST 382

SJST 385: Internship

Credits	1-4
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SJST 400: Special Topics in Social Justice Studies

In this course topics in Social Justice Studies are explored. Topics vary from term to term.

Credits	1-4
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SJST 425: Wealth and Inequality

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.

Credits	4
Degree Attributes	CoB: Social Science

SJST 434: African-American Literature

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.

Credits	4
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SJST 450: Independent Study

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.

Credits	1-4
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SJST 456: Human Development: Exceptionality

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. Declaration of minor in education; or permission of instructor.

Credits	3
Degree Attributes	CoB: Social Science
Prerequisites	EDUC 230 and EDUC 231

SJST 461: Special Topics Seminar

In this course topics in Social Justice Studies are explored. Topics vary from term to term.

Credits	1-4
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SJST 465: Gender Race Class and Media

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	COMM 110

SOCI 110: Introduction to Sociology

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.

Credits	4
Degree Attributes	CLAS: (E3) Soc Sci-Soc/Anth CoB: Social Science SoAD: Humanities-'Other'
Crosslisted	SJST 110

SOCI 200: Special Topics

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. (Sufficient demand)

Credits	1-4
Prerequisites	
SOCI 110 or ANTH 110	
Semester Offered	Sufficient demand

SOCI 214: Environment Politics and Society

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.

Credits	4
Degree Attributes	CoB: Social Science
Crosslisted	
ENVS 214 ; POLS 214	

SOCI 229: Social Science Inquiry

This course aims to introduce students to how to research society. Students examine different research approaches (both qualitative and quantitative); learn how to read/ understand published research; demonstrate an understanding of various research approaches; and understand; interpret; and critically analyze published research on social and political phenomena.

Credits	4
Prerequisites	
POLS 110 or 150 or SOCI 110	

SOCI 230: Introduction to Data Analysis and Statistics

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.

Credits	4
Degree Attributes	CLAS: (03) Quant Reasoning CoB: Quant Reasoning
Prerequisites	
SOCI, ANTH, or POLS 110	
Crosslisted	
POLS 230	

SOCI 235: Socialization

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. (Alternate years).

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
SOCI 110 or ANTH 110	
Semester Offered	Alternate Years

SOCI 236: Cults Religions and Fandom

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? (Alternate years)

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
SOCI 110 or ANTH 110	
Semester Offered	Alternate Years

SOCI 237: Media and Politics

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.

Credits	4
Degree Attributes	CoB: Social Science
Crosslisted	
COMM 237 ; POLS 237	

SOCI 242: Social Problems

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. (Sufficient demand)

Credits	4
Degree Attributes	CLAS: (E3) Soc Sci-Soc/Anth CoB: Social Science
Semester Offered	Sufficient demand

SOCI 245: Crime and Society

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
SOCI/SJST 110	

SOCI 253: Social Welfare Institutions

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.

Credits	4
Degree Attributes	CoB: Social Science
Crosslisted	
WGST 253	

SOCI 300: Special Topics

Credits	2-4
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SOCI 343: Race and Ethnicity

A discussion of theory and research concerning racial and ethnic relations in the United States and in various parts of the world.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Social Science

SOCI 344: Sociology of Deviance & Criminal Behavior

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
SOCI 110 or ANTH 110	

SOCI 346: Sociology of Sex and Gender

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
SOCI 110 or ANTH 110	

SOCI 348: Sociology of Families

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
SOCI 110 or ANTH 110	

SOCI 349: Sociology of Health Illness & Dis/ability

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
SOCI 110 or ANTH 110	

SOCI 355: Power Privilege and Inequality

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.

Credits	4
Prerequisites	
SOCI 110 or ANTH 110	

SOCI 356: Social Movements

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?

Credits	4
Degree Attributes	CoB: Social Science
Crosslisted	
POLS 356 ; SJST 356	

SOCI 400: Special Topics

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. (Sufficient demand)

Credits	1-4
Prerequisites	
SOCI 110 or ANTH 110	
Semester Offered	Sufficient demand

SOCI 420: Social Theory: A Survey

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. (Fall; odd years)

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
SOCI 110 or ANTH 110	
Semester Offered	Fall; odd years

SOCI 431: Research Design and Strategies

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
SOCI 230 or POLS 230	

SOCI 450: Independent Study

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.

Credits	1-4
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SOCI 470: Application of Sociology Field Work

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. Junior or senior standing and permission of instructor. (Sufficient demand)

Credits	2-4
Semester Offered	Sufficient demand

SPAN 101: Spanish I

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.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities
Corequisites	
SPAN 101D	

SPAN 102: Introductory Spanish II

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.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities
Prerequisites	SPAN 101

SPAN 200: Special Topics

Subject matter not covered in other courses. Topics vary from one semester to another.

Credits	1-4
Degree Attributes	CoB: Humanities

SPAN 201: Intermediate Spanish III

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. (Fall)

Credits	4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities
Prerequisites	SPAN 102
Corequisites	SPAN 201D
Semester Offered	Fall

SPAN 201D: Discussion

Credits	0
Corequisites	SPAN 201

SPAN 202: Intermediate Spanish IV

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. (Spring)

Credits	4
Degree Attributes	CLAS: (02) Foreign Language CoB: Humanities
Prerequisites	SPAN 201
Corequisites	SPAN 202D
Semester Offered	Spring

SPAN 202D: Discussion

Credits	0
Corequisites	SPAN 202

SPAN 213: Speaking the Unspeakable: Argentina's Literature of Dictatorship

This course introduces literary representations of state violence and resistance during the Argentine military dictatorship of the 1970s and 1980s. We engage in close readings of a variety of literary genres; including novels; short stories; autobiography; and testimonial literature. We combine literary readings with study of historical and theoretical texts in order to deepen our understanding of state terrorism; resistance; trauma; memory; and justice. The course is conducted in English; including the readings and films.

Credits	4
Degree Attributes	CLAS: (A) Literature AU: Global Perspective CoB: Social Science
Crosslisted	
GLBS 213 , SJST 213	

SPAN 215: Framing Gender: Latin American Film

This course introduces students to Latin American film from the 1940's to the present. Students analyze filmic representations of gender; race; sexuality; and socio-economic class in historical context; exploring relationships among art; politics and culture. Students develop an understanding of film-making practices and acquire and apply critical skills and theoretical approaches to thinking; speaking; and writing about films.

Credits	4
Degree Attributes	CLAS: (C) The Arts AU: Global Perspective CoB: Humanities
Crosslisted	
GLBS 215 ; WGST 215	

SPAN 216: Cuba Close Up: Film since the Revolution

Cuban cinema was transformed by the Revolution; which elevated the importance of film in Cuba and contributed to its political nature. Students analyze filmic representations of gender; race; and socioeconomic class in their historical contexts; exploring the relationship among art; politics; and culture. Students develop critical skills for viewing and interpreting films and for speaking and writing about films and film genres.

Credits	4
Degree Attributes	CLAS: (C) The Arts AU: Global Perspective CoB: Humanities
Crosslisted	
GLBS 216 , WGST 216	

SPAN 217: Exiled from Justice: Equatorial Guinean Writers in Africa and Spain

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.

Credits	4
Degree Attributes	CLAS: (A) Literature AU: Global Perspective CoB: Humanities
Crosslisted	
SJST 217	

SPAN 218: The Bombs and Ballots of Basque Literature in Spain

This course explores Basque cultural production in the context of Basque nationalist terrorism in Spain. The political context of this parliamentary monarchy and the history of ETA; the Basque nationalist terrorist organization; frames the close reading of Basque poems; short stories; movies and a novel. Does this cultural production provide for its readers the definition of the contemporary Basque nation?

Credits	4
Degree Attributes	CLAS: (A) Literature AU: Global Perspective CoB: Humanities

SPAN 220: Literatura Infantil y Juvenil

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.

Credits	4
Degree Attributes	CLAS: (A) Literature

SPAN 221: Accelerated Spanish-Heritage

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.

Credits	4
Degree Attributes	CLAS: (02) Foreign Language

SPAN 300: Special Topics

Subject matter not covered in other courses. Topics vary from one semester to another.

Credits	1-4
Degree Attributes	CoB: Humanities

SPAN 301: Advanced Conversation and Composition

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. (Fall)

Credits	4
Degree Attributes	CoB: Humanities
Prerequisites	
SPAN 202	
Semester Offered	Fall

SPAN 311: Peninsular Culture and Literature I: Medieval - Eighteenth Century

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)

Credits	4
Degree Attributes	CoB: Humanities
Semester Offered	Alternate Years

SPAN 312: Peninsular Culture and Literature II: 19th - 20th Century

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)

Credits	4
Degree Attributes	AU: Global Perspective
Semester Offered	Alternate Years

SPAN 315: Latin American Culture and Literature I

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)

Credits	4
Degree Attributes	CoB: Humanities
Semester Offered	Alternate Fall

SPAN 316: Latin American Culture and Literature II

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)

Credits	4
Degree Attributes	AU: Global Perspective CoB: Humanities
Semester Offered	Alternate Spring

SPAN 360: Literary Theory Seminar

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.

Credits	4
Degree Attributes	CoB: Humanities
Prerequisites	SPAN 202

SPAN 400: Topics in Hispanic Literature

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.)

Credits	1-4
Semester Offered	Sufficient demand

SPAN 402: Readings in Modern Latin American Literature

Latin American literature from Modernism to the present. Readings are selected from the works of such authors as Dario; Neruda; Mistral; Borges; Garcia Marques; Cortzar; Donoso; and Vargas Llosa. Gaucho; Indianist and Revolutionary novels are also considered. Taught in Spanish. (GP) (Sufficient demand)

Credits	4
Degree Attributes	AU: Global Perspective
Semester Offered	Sufficient demand

SPAN 404: Latinos/as in the United States

An introduction to important writings; art and/or films about the experiences of Latino communities in the United States. Addresses; for example: socio-political; gender; class; language; and generational-change issues reflected in various discourses. Given in Spanish and English.

Credits	4
Degree Attributes	AU: Global Perspective
Prerequisites	
	SPAN 301

SPAN 450: Independent Study

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.

Credits	1-4
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SPAN 485: Internship in Spanish

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.

Credits	1-4
Degree Attributes	AU: Global Perspective

SPAN 490: Modern Languages Senior Seminar

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.

Credits	0
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SPED 456: Human Development: Exceptionality

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. Declaration of minor in education; or permission of instructor.

Credits	3
Degree Attributes	CoB: Social Science
Prerequisites	
	EDUC 230 and EDUC 231

SPHS 101: Introduction to Sports and Health Sciences

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.

Credits	3
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SPHS 102: Medical Terminology

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.

Credits	2
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SPHS 103: Foundations of Sport Injury and Illness

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.

Credits	3
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SPHS 111: Emergency Care in Health and Human Performance

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.

Credits	3
Degree Attributes	AU: Wellness (Fall '19)
Prerequisites	
SPHS 102	

SPHS 119: Responding to Emergencies

This course combines instruction with practical hands-on training to equip students with the knowledge and skills needed to provide basic life support in emergency situations. Participants will learn to recognize and respond to various medical emergencies; including cardiac arrest; respiratory distress; and common traumatic injuries; with a focus on administering First Aid; CPR; and using an Automated External Defibrillator (AED). *(Spring)

Credits	2
Degree Attributes	AU: Wellness (Fall '19)
Corequisites	
SPHS 119L	

SPHS 119L: Lab-Responding to Emergencies

Credits	0
Corequisites	
SPHS 119	

SPHS 190: Principles of Strength Training and Reconditioning

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.

Credits	2
Degree Attributes	AU: Phys Fitness (Fall '19+)
Prerequisites	
SPHS393	

SPHS 211: Orthopedic Assessment I

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.

Credits	4
Prerequisites	
SPHS103	

SPHS 212: Orthopedic Assessment II

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.

Credits	4
Prerequisites	
SPHS 211	

SPHS 222: Nutrition for Health and Human Performance

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.

Credits	2
Degree Attributes	CLAS: (F-II) Scientific Knowldg CoB: Natural Science AU: Wellness (Fall '19)

SPHS 231: EMT Basic I

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. This course includes a lab to provide students with opportunities for active learning to improve retention and enhance the connection between theoretical concepts and practical application in the study of emergency medicine.

Credits	3
Prerequisites	
SPHS 102	

SPHS 232: EMT Basic II

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. This course includes a lab to provide students with opportunities for active learning to improve retention and enhance the connection between theoretical concepts and practical application in the study of emergency medicine.

Credits	3
Prerequisites	
SPHS 231	

SPHS 301: Clinical Experience in Sports Health and Sciences I

This is an observational 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 healthcare professional working within a Division-III collegiate athletic training department or secondary school athletic department.

Credits	1
Prerequisites	
SPHS 111 , SPHS 231	

SPHS 303: Prevention and Care Strategies for Sport Injury and Illness

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.

Credits	2
Prerequisites	
SPHS103	

SPHS 310: Orthopedic Procedures

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.

Credits	2
Prerequisites	
SPHS 212	

SPHS 320: Psychosocial Strategies Sports

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.

Credits	2
Prerequisites	
PSYC 101	

SPHS 350: Therapeutic Interventions

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.

Credits	4
Prerequisites	
	SPHS 212

SPHS 392: Biomechanics

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.

Credits	3
Prerequisites	
	BIOL 307
Corequisites	
	SPHS 392L

SPHS 392L: Lab-Biomechanics

Credits	0
Corequisites	
	SPHS 392

SPHS 393: Physiology of Exercise

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.

Credits	3
Prerequisites	
	BIOL 308

SPHS 394: Principles of Strength Training and Reconditioning

This course explores the foundational principles of strength training and reconditioning. Emphasis is placed on the exercise sciences (i.e.; anatomy; exercise physiology; biomechanics; motor learning; and nutrition); as well as key topics such as performance testing; exercise selection and technique; program design; and adaptations to training. Through instruction and practical application; students will learn to design; implement; and modify strength and conditioning programs that optimize athletic performance and promote recovery following injury.

Credits	2
Degree Attributes	AU: Phys Fitness (Fall '19+)

SPHS 395: Strength Training and Reconditioning Techniques

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.

Credits	2
Prerequisites	
	SPHS 190

SPHS 401: Clinical Experience in Sports Health and Sciences II

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.

Credits	1-2
Prerequisites	
SPHS 301	

SPHS 402: Clinical Experience in Sports Health and Sciences III

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.

Credits	2-3
Prerequisites	
SPHS 401	

SPHS 410: Medical and Pharmacological Aspects in Sports Medicine

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.

Credits	3
Prerequisites	
SPHS 301	

SPHS 432: Organization and Administration of Athletics

An in-depth study of organizational; administrative; and management theories and practices for entry- level professionals in healthcare; fitness; and athletic administration. Topics include: organizational planning; financial resource management; human resource management; facility design and management; risk management; insurance systems; as well as legal and ethical considerations.

Credits	2
Prerequisites	
SPHS 301	

SPHS 459: Research Methods in Sports Health and Sciences

This course is designed to introduce students to the importance and process of conducting research in the field of Sports and Health Sciences. Students will also develop the knowledge and skills for solving clinical problems using evidence-based medicine.

Credits	2
Prerequisites	
SPHS 301	

SPHS 470: Capstone in Sports and Health Sciences

This is a course that culminates the knowledge and skills a student has gained in the multidisciplinary areas of the sports and health sciences major and focuses on the final preparations for a career in healthcare or to continue their education towards an advanced degree.

Credits	1
Prerequisites	
SPHS 459	

SUST 101: Introduction to Sustainability

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)

Credits	4
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TEST 100: Test course

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Credits	5-10
Degree Attributes	CLAS: (E3) Soc Sci-Soc/Anth AU: Global Perspective CoB: Social Science SoAD: Humanities-'Other'

THEA 110: Introduction to Theatre

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts CoB: Humanities SoAD: Humanities-'Other'

THEA 120: Technical Theatre

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)

Credits	4
Degree Attributes	CLAS: (C) The Arts
Corequisites	
THEA 120L	

THEA 145: Improvisation: Just Say Yes!

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts AU: Phys Fitness (Fall '19+)

THEA 200: Special Topics

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.

Credits	1-4
Corequisites	
THEA 200L	

THEA 205: Playmaking

In this workshop course; students will learn various approaches to dramatic playwriting. We will be reading works of established and new playwrights; discussing dramatic structure (including conflict; exposition; events; action; motivation; subtext; character; etc.) and most importantly using writing exercises both in class and at home to develop a short play. Each student will complete a play of at least 10 minutes running time in length as a final requirement of the class. The completed plays will be performed in a public reading. (Cross-listed as [ENGL 205](#))

Credits	4
Degree Attributes	CLAS: (C) The Arts CoB: Humanities

THEA 211: Women in Theatre Society and Politics

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.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities-'Other'
Crosslisted	WGST 211

THEA 212: From Page to Stage: Script Analysis

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts CoB: Humanities

THEA 230: Stage Management and the Art of Production Collaboration

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. (Fall)

Credits	4
Semester Offered	Fall

THEA 240: Acting I

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts

THEA 241: Vocal Production for Theatre

Exercises and techniques to free the voice and improve projection; resonance; and articulation. Covers international phonetic alphabet and standard stage speech.

Credits	4
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THEA 242: Collaborative Performance Lab

This course; culminating in a public performance; will provide students with specialized focus on devised; ensemble theatre-making in an experimental workshop setting.

Credits	4
Degree Attributes	CLAS: (C) The Arts

THEA 245: Improvisation: Just Say Yes!

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.

Credits	2
Degree Attributes	CLAS: (C) The Arts AU: Phys Fitness (Fall '19+)

THEA 251: Theatre Colloquium

This once-per-month class is designed as a forum for majors and minors to discuss progress and challenges 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. (Fall/Spring)

Credits	1
Semester Offered	Fall/Spring

THEA 270: Play Production

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.

Credits	2
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THEA 290: Acting in Verse

This course focuses on developing acting skills specifically for verse drama. Students will explore and utilize various techniques, including scansion, phrasing, transitioning between verse and prose, and vocal work. Students will study a variety of verse plays from different eras and styles, and will work on scene study and monologue performance. (Alternating Spring)

Credits	2
Prerequisites	THEA 240

THEA 300: Special Topics

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.

Credits	1-4
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THEA 311: Classical World Theatre: History Art Politics & Society

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.

Credits	4
Degree Attributes	CoB: Humanities SoAD: Humanities-'Other'

THEA 312: Modern and Contemporary World Theatre: History Art Politics & Society

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts CoB: Humanities SoAD: Humanities-'Other'
Prerequisites	THEA 311

THEA 320L: Lab-Scene Design

Credits	0
Corequisites	THEA 320

THEA 322: Stage Costume Design

A costume focused design course which builds on the principles of design taught in [THEA 220](#). It further develops skills in research methodology; script analysis; costume design theories; artistic processes; and costume construction for specific plays. Lab hours required.

Credits	3
Prerequisites	PDAT 220

THEA 330: Directing I

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts
Prerequisites	THEA 212 or 240

THEA 340: Acting II

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.

Credits	4
Prerequisites	THEA 240

THEA 342: Intermediate Performance Lab

Intermediate level continuation of [THEA 242](#).

Credits	4
Prerequisites	THEA 242

THEA 350: Independent Study

Academic inquiry into an area not covered in any established course; and carried on outside the usual instructor/classroom setting. Junior standing and an approved Plan of Study required.

Credits	1-4
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THEA 370: Advanced Play Production

Advanced level continuation of [THEA 270](#). May be repeated for credit up to a maximum of 6 credit hours.

Credits	2
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THEA 385: Internship in Theatre

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 instructor or Department Coordinator.

Credits	2-4
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THEA 400: Special Topics

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.

Credits	1-4
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THEA 430: Directing I

The theory and practice of play production from script selection to early rehearsals to final production; focusing on directorial vision; text analysis; staging principles; actor coaching; organization of the production book. Final scenes or short one-act plays to be performed for the public are expected. A full range of scripts and approaches is discussed and used for classroom and outside assignments. Prerequisite: Junior Standing.

Credits	3
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THEA 431: Directing II

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.

Credits	4
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Prerequisites
THEA 330

THEA 440: Acting III

Intended for the serious student of acting; this advanced performance course applies the in-depth skills developed in Acting II to historical texts: the Greek classics; Shakespeare; Restoration Comedy; Commedia dell'arte; modern realism.

Credits	3
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Prerequisites
THEA 240 , THEA 340

THEA 442: Advanced Performanc Lba

Advanced level continuation of [THEA 242](#) and 342. (Fall)

Credits	4
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Prerequisites
THEA 342

THEA 450: Independent Study

Credits	1-4
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THEA 490: Senior Seminar

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.

Credits	1
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THEA 495: Senior Project

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. Prerequisites: senior standing; approved written proposal; permission of instructor.

Credits	2-4
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THEA 496: Senior Project I: Development

Students develop and refine a theatre project proposal in their area of interest. Upon faculty approval; they begin preparatory work such as research; design; rehearsal planning; or budgeting. The course culminates in a progress presentation demonstrating readiness for execution. Prerequisites: Theater Major with Senior StandingOffered in the Fall

Credits	2
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THEA 497: Senior Project II: Execution

Students execute their approved theatre projects with faculty supervision; focusing on artistic and logistical problem-solving. The course concludes with a final presentation; performance; or deliverable; along with a reflective analysis of the process. Prerequisites: [THEA 496](#); Senior Standing

Credits	2
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Prerequisites
THEA 496

UNIV 086: Fiat Success Seminar

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.

Credits	0
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UNIV 100: Special Topics

Credits	0-4
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UNIV 101: Common Ground

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.

Credits	1
Degree Attributes	CoB: Social Science SoE: Other Humanities/Soc Sci

UNIV 102: Career and Professional Success

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.

Credits	1
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UNIV 103: Dynamics of Student Success

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).

Credits	1
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UNIV 110: Drawn to Diversity

The D2D program uses the CRAFT Model (Contact; Research; Action; Feedback; and Teaching) to produce Community Based-Art; which strives to strengthen a community by providing a creative outlet for all voices to be respectfully shared.

Credits	2
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UNIV 115: Concepts of Service Learning

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.

Credits	2
Degree Attributes	CoB: Social Science AU: Service Learning Courses
Crosslisted	
SJST 115	

UNIV 200: Special Topics

Credits	1-4
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UNIV 400: Special Topics

Credits	1-4
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UNIV 450: Independent Study

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.

Credits	1-4
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VARS 101: Varsity Sports: Basketball

Credits	0
Degree Attributes	AU: Phys Fitness (Fall '19+)

VARS 102: Varsity Sports: Cross-Country

Credits	0
Degree Attributes	AU: Phys Fitness (Fall '19+)

VARS 103: Varsity Sports: Equest-Hunt

Credits	0
Degree Attributes	AU: Phys Fitness (Fall '19+)

VARS 104: Varsity Sports: Football

Credits	0
Degree Attributes	AU: Phys Fitness (Fall '19+)

VARS 105: Varsity Sports: Golf

Credits	0
Degree Attributes	AU: Phys Fitness (Fall '19+)

VARS 106: Varsity Sports: Lacrosse

Credits	0
Degree Attributes	AU: Phys Fitness (Fall '19+)

VARS 107: Varsity Sports: Skiing

Credits	0
Degree Attributes	AU: Phys Fitness (Fall '19+)

VARS 108: Varsity Sports: Soccer

Credits	0
Degree Attributes	AU: Phys Fitness (Fall '19+)

VARS 109: Varsity Sports: Softball

Credits	0
Degree Attributes	AU: Phys Fitness (Fall '19+)

VARS 110: Varsity Sports: Swimming

Credits	0
Degree Attributes	AU: Phys Fitness (Fall '19+)

VARS 111: Varsity Sports: Tennis

Credits	0
Degree Attributes	AU: Phys Fitness (Fall '19+)

VARS 112: Varsity Sports: Track

Credits	0
Degree Attributes	AU: Phys Fitness (Fall '19+)

VARS 113: Varsity Sports: Volleyball

Credits	0
Degree Attributes	AU: Phys Fitness (Fall '19+)

VARS 114: Varsity Sports: Equest-Western

Credits	0
Degree Attributes	AU: Phys Fitness (Fall '19+)

VARS 115: Varsity Sports: Cheerleading

Credits	0
Degree Attributes	AU: Phys Fitness (Fall '19+)

VARS 116: Varsity Sports: Eques-Dressage

Credits	0
Degree Attributes	AU: Phys Fitness (Fall '19+)

VARS 117: Varsity Sports: Baseball

Credits	0
Degree Attributes	AU: Phys Ed (pre Fall '19) AU: Phys Fitness (Fall '19+)

VARS 118: Varsity Sports: Rugby

Credits	0
Degree Attributes	AU: Phys Fitness (Fall '19+)

WASH 225: Gender Politics & Power

Credits	3
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WASH 383: Wash Sem/Economic Policy Sem I

Credits	4
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WASH 384: Wash Sem/Econ Policy: Sem II

Credits	4
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WASH 385: Wash Sem/Econ Policy: Intern

Credits	4
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WASH 396: Wash Sem Topics

Credits	4
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WASH 410: Wash Sem/Amer Gov & Pol Sem I

Credits	4
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WASH 411: Wash Sem/Amer Gov & Pol Sem II

Credits	4
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WASH 412: Wash Sem/Am Gov & Pol Res Proj

Credits	4
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WASH 416: Wash Sem/Amer Gov & Pol Intern

Credits	4
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WASH 420: Wash Sem/Int'l Bus&Trade Sem I

Credits	4
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WASH 421: Wash Sem/Intl Bus&Trade Sem II

Credits	4
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WASH 423: Wash Sem/Int'l Bus&Trade Intrn

Credits	4
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WASH 450: Wash Journalism Semester I

Credits	4
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WASH 451: Wash Journalism Semester II

Credits	4
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WASH 452: Wash Journalism Semest: Intern

Credits	4
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WASH 496: Wash Sem/Topics

Credits	4
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WASH 519: Wash Sem/Topics Int'l Politics

Credits	4
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WASH 596: Wash Sem Topics

Credits	1-4
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WELL 100: Special Topics

Offerings vary year to year depending on the availability of faculty with expertise in a particular health or wellness area.

Credits	1-4
Degree Attributes	AU: Wellness (Fall '19)

WELL 101: Foundations of Wellness

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. (Every term)

Credits	2
Degree Attributes	AU: Wellness (Fall '19)
Semester Offered	Every Term

WGST 101: Women and Gender in Society

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.

Credits	4
Degree Attributes	CoB: Social Science SoAD: Humanities-'Other'
Crosslisted	
SJST 201	

WGST 200: Special Topics

Topics vary in content from term to term.

Credits	1-4
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WGST 201: Gender and Leadership

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.

Credits	2
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WGST 208: Francophone Queer Voices

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.

Credits	4
Degree Attributes	CLAS: (A) Literature AU: Global Perspective

WGST 211: Women in Theatre Society and Politics

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.

Credits	3
Degree Attributes	CoB: Humanities
Crosslisted	
THEA 211	

WGST 215: Framing Gender: Latin American Film

This course introduces students to Latin American film from the 1940's to the present. Students analyze filmic representations of gender; race; sexuality; and socio-economic class in historical context; exploring relationships among art; politics and culture. Students develop an understanding of film-making practices and acquire and apply critical skills and theoretical approaches to thinking; speaking; and writing about films.

Credits	4
Degree Attributes	CLAS: (C) The Arts AU: Global Perspective
Crosslisted	
GLBS 215 ; SPAN 215	

WGST 216: Cuba Close Up: Film since the Revolution

Cuban cinema was transformed by the Revolution; which elevated the importance of film in Cuba and contributed to its political nature. Students analyze filmic representations of gender; race; and socioeconomic class in their historical contexts; exploring the relationship among art; politics; and culture. Students develop critical skills for viewing and interpreting films and for speaking and writing about films and film genres.

Credits	4
Degree Attributes	CLAS: (C) The Arts AU: Global Perspective
Crosslisted	
	GLBS 216 , SPAN 216

WGST 217: Musical Reorientations

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.

Credits	4
Degree Attributes	CLAS: (C) The Arts CoB: Humanities

WGST 219: Musical Reorientations

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.

Credits	4
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WGST 222: Stage Makeup & Theory

Credits	4
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WGST 253: Social Welfare Institutions

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.

Credits	4
Degree Attributes	CoB: Social Science
Crosslisted	
	SOCI 253

WGST 254: Women Writers

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.

Credits	2-4
Degree Attributes	CLAS: (A) Literature SoAD: Humanities-'Other'
Crosslisted	
	ENGL 254 ; SJST 254

WGST 256: Multicultural American Literature

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. (

Credits	4
Degree Attributes	CLAS: (A) Literature CoB: Humanities SoAD: Humanities-'Other'
Crosslisted	
	ENGL 256 ; SJST 256

WGST 300: Special Topics

Topics vary in content from term to term.

Credits	1-4
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WGST 305: Gender and Organizations

This course builds an understanding of gender issues within organizations as well as policies that organizations can implement to create a more equitable work environment. Topics of discussion encompass the impact of gender on communication; influence; and perceptions of competence; what progress has been made regarding gender equality and what still remains to be resolved.

Credits	3
Degree Attributes	CoB: Social Science
Crosslisted	
	MGMT 305

WGST 318: Gender Equity in Business

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.

Credits	3
Degree Attributes	CoB: Social Science
Crosslisted	
	MGMT 318

WGST 320: Parenting Seminar

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.

Credits	2
Degree Attributes	CoB: Social Science
Prerequisites	
	PSYC 101

WGST 323: Alphadelphian

Students will work together to produce the annual newsletter of the Women's and Gender Studies program. Along the way; we will analyze media representation of feminist issues; brainstorm topics; conduct research; and write feature articles; formulate questions; conduct interviews; and write profiles; workshop; copyedit; and proofread; and reflect on what it means to be part of the WGST community.

Credits	2
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WGST 324: Queer American History

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.

Credits	4
Degree Attributes	CoB: Humanities

WGST 346: Sociology of Sex and Gender

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
SOCI 110 or ANTH 110	

WGST 348: Sociology of Families

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
SOCI 110 or ANTH 110	

WGST 349: Sociology of Health Illness & Dis/ability

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.

Credits	4
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WGST 351: Human Sexuality

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.

Credits	4
Degree Attributes	CoB: Social Science AU: Wellness (Fall '19)
Crosslisted	
PSYC 351	

WGST 360: Topics in Women's and Gender Studies

Topics vary in content from term to term.

Credits	1-4
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WGST 372: Psychology of Gender

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](#).

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
PSYC 101	

WGST 382: Gender and Art History: Feminist Art in a Global Frame

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.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Humanities
Crosslisted	
ARTH 382 ; SJST 382	

WGST 400: Special Topics

Topics vary in content from term to term.

Credits	1-4
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WGST 408: Women Writers in the Middle Ages

This course examines the writings of medieval women - abbesses; merchants; wives; mothers; and mystics - to explore the challenges female writers such as Heloise; Margery Kempe; Julian of Norwich; and Christine de Pizan presented to orthodox Christianity; to gender stereotypes; and to medieval political and social structures.

Credits	4
Degree Attributes	CoB: Humanities
Crosslisted	
ENGL 408	

WGST 412

WGST 450: Independent Study

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.

Credits	1-4
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WGST 465: Gender Race Class and Media

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.

Credits	4
Degree Attributes	CoB: Social Science
Prerequisites	
COMM 110	

WGST 475: Women's Leadership Academy Practicum

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.

Credits	2
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WGST 481: International Women Writers

In this course we explore literature written by contemporary women from different cultures. Study focuses on voice; content; and style; with some attention to the conditions in which the work was produced and to its reception.

Credits	4
Degree Attributes	AU: Global Perspective CoB: Humanities
Prerequisites	
ENGL 325/326 or ENGL 327	
Crosslisted	
ENGL 481	

WGST 485: Internship

Credits	1-4
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XREG ASC: Cross-Registration at ASC

Credits	0-6
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For information on current faculty and Staff, please visit the Directory, available on the web via: <https://my.alfred.edu/directory/index.cfm>.

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