Alfred University

OUTSIDE *of* ORDINARY

2019-2020 UNDERGRADUATE CATALOG

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University Academic Program

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

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

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

On a weekly basis, students should expect to spend a minimum of two hours outside of class studying and completing assignments for each hour spent in class (three hours per week outside of class for each hour in class for art studios); which is a minimum of 45 hours of total learning time per credit hour for the term. Students taking an online course should, likewise, expect to spend about 45 hours of total learning time per credit hour in a term; the same amount of time as in a traditional, on-campus course.

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

Enrollment Status
Full-time student: Currently registered for 12 or more semester credit hours.
Part-time student: Currently registered for fewer than 12 semester credit hours.

Student Classification

Class Standing (based on semester credit hours earned)

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

Degree Requirements

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

- Complete all course requirements, including those required for the major, general education, and the minimum number of credits for the degree sought as set forth by the faculty of the college or school in which the student is enrolled, and as described under "major requirements" in this catalog.
  Note: A three semester hour transfer course may be used to satisfy a four semester hour AU requirement in a major or in general education. However, the minimum number of total semester credit hours for the degree must still be earned to complete degree requirements.
- Earn a cumulative grade point average (GPA) of at least 2.00.
- Satisfy the Common Ground Requirement
  This requirement is satisfied by completing with a passing grade the 1-credit course UNIV 101-Common Ground.
- Satisfy the Global Perspective Requirement
  This requirement may be satisfied by:
  1. Taking an approved "GP" course (see p.10)
  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 post-secondary 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 MS 101 or MS 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, p. 4).

Alfred University General Education Goals

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

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

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

- The College of Liberal Arts and Sciences curricula addresses the university general education goals through both a breadth of study and the depth offered in the majors.
- The College of Business fosters general education outcomes through both a strong liberal arts foundation and contemporary, innovative courses that prepare students for professional careers.

- The Inamori School of Engineering embeds university general education goals in its inquiry-based programs to prepare technically proficient and broadly educated engineers and scientists.
- The School of Art and Design incorporates university general education goals throughout its multi-disciplinary curriculum that cultivates creative and scholarly research in art.

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

Through meeting these common general education goals, all Alfred University students develop social responsibility and the ability to use intellectual, practical and creative skills in problem solving. AU graduates are well-educated, independent thinkers prepared for a rapidly changing world and lives of continuous intellectual and personal growth.

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

Students may earn two baccalaureate degrees to be awarded simultaneously ("double degrees") when the two degree programs are offered within the School of Art and Design (B.S. and B.F.A.) or when the two programs are offered by two distinct AU Colleges/Schools. (e.g.: B.A. in the College of Liberal Arts and Sciences and B.F.A. in the School of Art and Design; B.S. degrees offered in the College of Professional Studies and in the Inamori School of Engineering.)

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

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

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

To be eligible for consideration, the student must have been nearing completion of coursework required for the degree and must have been in good academic standing with a grade point average sufficient to have earned the degree.
Recommendation for award of the degree must be made by the faculty in the student's major area, and approved by the Chair or Director, the College or School Dean, and the Provost. Final approval for awarding of posthumous degrees shall rest with the Board of Trustees, which will act upon the recommendation of the President of Alfred University.

Credits, Grades and Grade Point Average (GPA)
The following grade designations are used at the undergraduate level:

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

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

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

Pass/Fail Grading
1. Undergraduate students may designate up to four semester hours each semester to be taken for a grade of P or F provided they have not been previously enrolled in the course and the course is not a required course in their major program. Grades of D or better will be recorded as P. Advisor approval is required. The periods for selecting and canceling the Pass/Fail option are designated in the Academic Calendar. These additional limitations apply:
   - Students in the College of Liberal Arts and Sciences may not take courses that fulfill major, minor, or General Education requirements on a Pass/Fail basis
   - Students in the College of Business may not take courses that fulfill major requirements, or liberal arts

credits for the BS degree, or requirements for the minor, on a Pass/Fail basis
- Students in the Inamori School of Engineering may not use the Pass-Fail grading system for any course presented for graduation credits, except in the following instances: Co-op, off-campus study, and ENGR 160/360 Seminar

2. Certain courses may be designated by the college curriculum committees to be graded only Pass or Fail.

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

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

Repeating of Courses
When a course is repeated, the course credits shall be used only once and the grade points and credits corresponding to the most recent grade earned shall be used in calculating the cumulative GPA. While the original grade is no longer used in the GPA, it remains a part of the record and it appears on the student's transcript. If a course cannot be repeated because it is no longer offered, a course with similar content may, with permission of the Dean, be taken in place of the original and recorded as a repeat.

Grade Changes
All grade changes must be completed prior to the Registrar's certification of graduation. Assigning course grades at Alfred University is the exclusive responsibility of course instructors. Nothing in this policy shall be construed to limit the ability of the Registrar to change grades of incomplete (I) to fail (F) in accordance with the policy on grades of "Incomplete." Nothing in this policy shall be construed as substituting or supplanting rules, regulations, or procedures contained in the policy on Academic Dishonesty.
- A grade may be changed by the instructor of a course to convert an Incomplete or IP to a final grade.
- A grade may be changed by the instructor of a course to correct an error. The Division/Program Chair and appropriate Dean must be notified of all grade changes in writing (stating reason(s) for the change) except for completion of work in courses graded I or IP.
- Once assigned, only the course instructor can change a course grade, except in rare circumstances when the course instructor's supervising Dean may change a grade. (See Appendix B in the Undergraduate Academic Regulations on my.alfred.edu for specific information on the circumstances under which a Dean may change a grade.)

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

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

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

The student may bring one other student or employee from Alfred University to the appeals committee hearing. Only members of the university community shall be permitted to attend the hearing. The invited other person shall not have the right to speak or otherwise participate in the hearing. No sound or video recording of the appeal committee hearing shall be permitted. All testimony given at the hearing shall be considered confidential except for communication to appropriate university faculty and administrators.

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

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

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

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

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

Registrar
Alfred University
One 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.

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

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

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

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

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

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

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 on p. 12)
- 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 on p. 13.)
- 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 on p. 14.) 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.
- Other standardized exams where no prescribed policy has been determined (DANTES, ECE) 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.

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

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

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

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

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

Academic Standing

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

Definitions

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

Students must maintain the following term and cumulative (overall) Grade Point Averages to remain in Good Standing: In the College of Liberal Arts and Sciences, in Performing Arts and in the Inamori School of Engineering: The minimum GPA is 2.00 regardless of the number of credits attempted*

In the School of Art and Design:

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

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

- A student whose term or cumulative GPA drops below the level established, or who is not satisfying requirements towards a degree, will be placed on Academic Probation or may be Academically Suspended or Dismissed.
- A student on Academic Probation who fails to attain the minimum term and cumulative GPA's for a second consecutive semester may be placed on Extended Academic Probation or on Academic Suspension, or may be Dismissed.
- A student with multiple semesters on Academic Probation or Extended Academic Probation, whether or not the semesters are consecutive, may be Academically Suspended or Dismissed.
- Students with a term or cumulative GPA below 1.00 are subject to Academic Suspension or Dismissal regardless of their prior academic standing.
- A student who is eligible for Academic Suspension a second time or who would be on Academic Probation or Extended Academic Probation for a third consecutive semester may be Academically Dismissed. A student eligible for a third Academic Suspension will be Dismissed from the University
- Students may appeal their Suspension or Dismissal through the Dean for presentation to the Scholastic Standards Committee of the College or School that placed academic sanctions on the student.

Academic Honors

Dean's List

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

Graduation Honors

Honors in the Field of Specialization

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

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

Overall Honors

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

Summa cum laude, or highest honors - GPA of 3.90 and no grade below B

Magna cum laude, or high honors - GPA of 3.70 and no grade below C

Cum laude, or honors - GPA of 3.30

Alfred University Scholar

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

Top Undergraduate Honors

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

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

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

Prizes and Awards

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

Honor Societies

The following are University Honor Societies in various disciplines:

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

Registration, Scheduling, and Attendance

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

Adding and Dropping Courses

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

Withdrawing from a Course

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

Attendance

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

Leave of Absence/Withdrawal and Readmission

Taking a Leave of Absence

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

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

Withdrawal and Readmission

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

Undergraduate students admitted to the University are expected to continue to register for classes at AU and to pursue their degree. Those admitted to *full time* study must enroll each Fall and Spring Semester. Students admitted to *part time* study must enroll at least once in any 12-month period. Unless on an approved leave of absence, those who do not enroll on a regular basis as specified are administratively withdrawn from the University. Students withdrawn under this provision forfeit their enrollment deposit.

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

Grades for Students Leaving School during the Semester

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

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

Academic Dishonesty (Unethical Practices)

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.

a) 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.
b) 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.
c) 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.
d) 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.
e) 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, over-reliance on lengthy quotations can be considered a form of plagiarism.
f) 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:

a) Before a formal charge of academic dishonesty is made, the instructor is strongly encouraged to have his or her department chair or, if that department chair is deemed inappropriate or impractical, another colleague or administrator, review the alleged infraction.
b) Within seven semester days after the infraction is observed or verified, the instructor shall advise the student orally, if possible, and by email that the student has (or may have) committed an act of academic dishonesty. This will allow simple misunderstandings and misinterpretations to be resolved. A semester day is defined as a day when the university is in session and classes/exams are held.

d) If the instructor remains convinced that an offense has occurred, a written statement of the offense will be sent to the student by email and also by regular mail. The statement will include whatever penalty the instructor considers appropriate. For offenses categorized as Tier One (see below), a copy will be sent to the instructor's dean, the student's dean, and the Provost. This letter should include a reference to this section of these regulations to inform students of their rights and the procedures to be followed if an appeal is needed.
e) The penalties assessed may range from non-grade penalties to failure in the course.
f) 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 without the instructor's permission. If an instructor is uncertain about categorizing an infraction as Tier One or Tier Two, he/she shall make a determination in consultation with a department chair or, if the chair is a party to the case or is otherwise unavailable, the dean or assistant dean of the college.

g) The academic dean of the student's college should advise the student of appeal procedures that are available.

Following a Charge of Academic Dishonesty

a) A student charged with an unethical practice may accept the judgment and penalty assessed by the instructor.
b) A student charged with an unethical practice may appeal in writing directly to the instructor who assessed the penalty within fourteen (14) semester days after the instructor sends email and written notification of the offense and penalty to the student. The fourteen semester-day period is not dependent on proof that the student has read the instructor's email or written notification.
c) 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.
d) If the instructor will not modify the penalty, the student may present the case to the Ombuds Officer
e) In the event the matter is not resolved in a manner satisfactory to all parties through the Ombuds Officer's review, the Ombuds Officer may at his/her own initiative, or shall at the student's request, refer the matter to an appeals committee. A student request for appeals committee consideration of the matter must be made to the Ombuds Officer within fourteen (14) semester days after the Ombuds Officer notifies the student orally, by email, or in writing, that the Ombuds Officer has been unable to resolve the matter.
h) The appeals committee will be constituted by the Ombuds Officer within 14 semester days. Membership of the appeals committee shall include one student, to come from the University Student Grievance Committee, and two full-time and/or tenured faculty. If the Student Senate has not appointed members of the Student Grievance Committee, or if those members stand in a conflict of interest with the student accused of the infraction, the Ombuds Officer may select any full-time senior student for this purpose. The appeals committee should meet as soon as possible after members of the committee have been selected. The appeals committee will review the case and prepare a written recommendation, to be forwarded to the student, the instructor(s) involved in the case, the student's academic dean, and the provost within seven semester days once the appeal committee has come to a recommendation.
i) The instructor, the appropriate departmental/divisional head (if he/she is not a party to the case), and the instructor's dean (if he/she is not a party to the case) will consider the recommendation and notify the student, the student's Academic Dean, and the Provost of their final decision.
j) 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.
k) 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.
l) All testimony given at the hearing shall be considered confidential except for communication to appropriate university faculty and administrators.
m) If the appeals committee judges that the student is not guilty of academic dishonesty and the instructor who made the initial charge accepts the recommendation of the committee, all written records pertaining to the matter will be destroyed.

Second Offense

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

a) A student found guilty of a second major infraction will be dismissed from the university within fourteen (14) semester days, unless the student appeals the charge.
b) 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).
c) 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.
d) In the case of a senior who plans to graduate at the end of the semester in which the second offense occurs, the appeals committee review should be conducted as soon as

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

Notification

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

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

Records

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

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

Religious Beliefs and Class Attendance

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

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

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

Courses that Satisfy the Global Perspective (GP) Requirement

In addition to the courses listed here, the Global Perspectives Committee may approve some "special topics" courses offered in a given term to apply to the GP requirement, depending on the topic covered. These courses will be designated "GP" in the Class Schedule on AU BannerWeb for that term.

Anthropology

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

Art History

ARTH 210	Global Perspectives: Paris
ARTH 304	Global Arts: Contemporary Asia
ARTH 352	Contemporary Projects in Art
ARTH 354	Recent Sculptural Practices
ARTH 382	Gender and Art History
ARTH 445	Culture through World Cinema
ARTH 466	Hist of Photog Non-Western World

Business

BUSI 305	German Auto Industry
BUSI 457	International Business

Communication Studies

COMM 221	Pop Culture Goes Global
COMM 315	Understanding Global Media
COMM 325	Global Communication

Economics

ECON 412	International Economics

English

ENGL 226	The Holocaust and Literature
ENGL 481	International Women Writers

Environmental Studies

ENVS 101	Environmental Studies I - Nat Sci
ENVS 102	Environmental Studies I - Soc Sci
ENVS 310	Ecology of the Bahamas

Equestrian Studies

EQUS 228	The Equine Industry in Ireland

Finance

FIN 458	International Financial Management

French

FREN 210	Global Perspectives: Paris
FREN 316	Contemporary French Culture
FREN 485	Internship in French

German

GRMN 485	Internship in German

Global Studies

GLBS 101	Introduction to Global Studies
GLBS 210	Global Perspectives: Paris
GLBS 213	Argentina's Lit of Dictatorship
GLBS 215	Framing Gender: Latin Amer Film

GLBS 216	Cuba Close Up: Film since Revol
GLBS 221	Pop Culture Goes Global
GLBS 315	Understanding Global Media
GLBS 325	Global Communication
GLBS 351	European Politics
GLBS 466	Histories of Photog Non-Western World
GLBS 495	Global Issues Seminar

History

HIST 107	The World in the 20th Century
HIST 111	Modern Western History
HIST 301	America in War in the 20th Century
HIST 321	The History of Fascism
HIST 322	Churchill, Stalin, Roosevelt, Hitler
HIST 326	Modern Middle East & North Africa
HIST 327	Propaganda: Persuasion, Art & War
HIST 382	Latin American Politics
HIST 383	The Nazi Holocaust

Marketing

MKTG 489	International Marketing

Music

MUSC 211	World Music

Political Science

POLS 253	Dictatorship and Democracy
POLS 271	World Politics
POLS 321	The History of Fascism
POLS 351	European Politics
POLS 373	Terrorism and Internat'l Security
POLS 382	Latin American Politics

Religious Studies

RLGS 105	Intro to Religions of the World
RLGS 165	Asian Religions
RLGS 274	Hindu Religious Traditions

Social Justice Studies

SJST 213	Argentina's Lit of Dictatorship
SJST 217	Equatorial Guinean Writers
SJST 226	The Holocaust and Literature
SJST 382	Gender and Art History

Sociology

SOCI 343	Race and Ethnicity
SOCI 495	Global Issues Seminar

Spanish

SPAN 213	Argentina's Lit of Dictatorship
SPAN 215	Framing Gender: Latin Amer Film
SPAN 216	Cuba Close Up: Film since Revol
SPAN 217	Equatorial Guinean Writers
SPAN 218	Bombs & Ballots Basque Lit in Spain
SPAN 312	Peninsular Culture and Lit
SPAN 316	Latin American Culture and Lit II
SPAN 485	Internship in Spanish

Women's and Gender Studies

WGST 215	Framing Gender: Latin Amer Film
WGST 216	Cuba Close Up: Film since Revol
WGST 382	Gender and Art History
WGST 481	International Women Writers

Advanced Placement (AP) Examination Equivalencies

AP Examination	Credit-Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
Art History	4 or 5	4	ARTH 130 and ARTH 140 (Area C)
Biology	4 or 5	4	BIOL 150 (Area F-I)
Calculus AB	4 or 5	4	MATH 151 (03-QR)
Calculus BC	3*	4	MATH 151 (03-QR) (w/Calc AB Subscore of 4 or 5)
Calculus BC	4 or 5	8	MATH 151 (03-QR) and MATH 152
Chemistry Chemistry	4 5	4 8	CHEM 105 (Area F-I) CHEM 105 and CHEM 106 (Area F-I)
Computer Science A	3, 4, or 5	4	CSCI 156
Computer Science AB 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
French Literature	4 or 5	4	FREN 102 (02-FL)
French Language	3 or 4 5	4 4	FREN 102 (02-FL) FREN 202 (FL)
German Language	3 or 4 5	4 4	GRMN 102 (02-FL) GRMN 202 (02-FL)
Comparative Government & Politics	4 or 5	4	POLS 110 (Area E2)
U.S. Government & Politics	4 or 5	4	POLS 110 (Area E2)
World History	4 5	4 8	HIST 100 (Area D) HIST 100 (Area D) +4 Cr History Elective
U.S. History	4 5	4 8	HIST 211 (Area D) HIST 211 and HIST 212 (Area D)
European History	4 5	4 8	HIST 110 (Area D) HIST 110 and HIST 111 (Area D)
Human Geography	4 or 5	4	General Ed (Area E3)
Italian	4, or 5	4	ITAL 102 (02-FL)
Latin Literature	4, or 5	4	LATN 102 (02-FL)
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: Mechanics	4 or 5	4	PHYS 125 (Area F-I)
Physics C: Elec & Magnet	4 or 5	4	PHYS 126 (Area F-I)
Psychology	4 or 5	4	PSYC 101 (Area E1)
Spanish Language	3 4 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 – Drawing	4 or 5	4	ART 111 (Area C)
Studio Art – 2D/3D (General)	4 or 5	4	ART 100 (Area C)

International Baccalaureate (IB) Equivalencies

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

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

IB Examination (level)	Credit-Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
Higher Level Exams: (4 or 5)		4	
Economics (HL)	4*-5	4	ECON 201 (Area E2)
English A (HL)	4*-5	4	ENGL 101 (01)
Languages (HL)	4*-5	4	(Lang) 101 (02)
Visual Arts (HL)	4*-5	4	ART 100 (Area C)
History of Americas (HL)	4*-5	4	HIST 211 (Area D)
History of Europe (HL)	4*-5	4	HIST 107 (Area D)
Biology (HL)	4*	4	BIOL 100 (Area F-I)
Biology (HL)	5	4	BIOL 150 (Area F-I)
Chemistry (HL)	4*-5	4	CHEM 103 (Area F-I)
Mathematics (HL)	4*-5	4	MATH 101 (03)
Physics (HL)	4*-5	4	PHYS 111 (Area F-I)
Psychology (HL)	4*-5	4	PSYC 101 (Area E1)
Theatre (HL)	4*-5	4	THEA 110 (Area C)
Theory of Knowledge	B or A	4	PHIL 101 (Area B)
	***Please Note: a 4 is considered for equivalent credit on HL exams only for students who have earned the IB Diploma**		
Higher Level Exams: (6 or 7)			
Economics (HL)	6-7	7	ECON 201, 202 (4 Cr. Area E2)
English A (HL)	6-7	8	ENGL 101, 102 (01)
Languages (HL)	6-7	8	(Lang) 101, 102 (02)
Visual Arts (HL)	6-7	8	ART 100 (Area C)
History of Americas (HL)	6-7	8	HIST 211, 212 (Area D)
History of Europe (HL)	6-7	8	HIST 107, 200 (Area D)
Biology (HL)	6-7	4	BIOL 150 (Area F-I)
Chemistry (HL)	6 7	4 8	CHEM 105 (Area F-I) CHEM 105, 106 (Area F-I)
Mathematics (HL)	6-7	8	MATH 101, 115 (03)
Physics (HL)	6-7	8	PHYS 111, 112 (Area F-I)
Psychology (HL)	6-7	8	PSYC 101 (Area E1), PSYC 100 (psychology elective)
Theatre (HL)	6-7	8	THEA 110, 200 (4 Cr. Area C)
Subsidiary Level Exams:			
Economics (SL)	5*-7	4	ECON 201 (Area E2)
English A (SL)	5*-7	4	ENGL 101 (01)
Languages (SL)	5*-7	4	(Lang) 101 (02)
Visual Arts (SL)	5*-7	4	ART 100 (Area C)
History of Americas (SL)	5*-7	4	HIST 211 (Area D)
History of Europe (SL)	5*-7	4	HIST 107 (Area D)
Biology (SL)	5*-7	4	BIOL 100 (Area F-I)
Chemistry (SL)	5*-7	4	CHEM 103 (Area F-I)
Mathematics (SL)	5*-7	4	MATH 101 (03)
Mathematical Studies (SL)	5*-7	4	MATH 101 (03)
Physics (SL)	5*-7	4	PHYS 111 (Area F-I)
Psychology (SL)	5*-7	4	PSYC 101 (Area E1)
Theatre (SL)	5*-7	4	THEA 110 (Area C)
	***Please Note: a 5 is considered for equivalent credit on SL exams only for students who have earned the IB Diploma**		

College Level Examination Program (CLEP) Equivalencies

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

CLEP Examination	Credit-Granting Score	Credit Hours Granted	Equivalent AU Course/Degree Requirement Area
Composition and Literature:			
American Literature	50*	4	ENGL 240
Analyzing & Interpreting Literature	50*	4	General Elective
College Composition Modular	50*	4	ENGL 101
English Literature	50*	4	ENGL 219
English Composition	n/a	none	none
Humanities	n/a	none	none
* Credit is granted only with an acceptable locally-graded essay			
Science and Mathematics			
College Algebra	50	3	MATH 115 (03-QR)
Algebra-Trigonometry	50	3	MATH 118 (03-QR)
Biology	50	4	BIOL 100 (Area F-II)
Chemistry	50	4	CHEM 100 (Area F-II)
Calculus with Elementary Functions	50	3	MATH 151 (03-QR)
Trigonometry	50	3	General Elective
College Mathematics	50	4	MATH 101 (03-QR)
Natural Science	n/a	none	none
Foreign Languages			
French	50-61	4	FREN 101 (02-FL)
	62+	8	FREN 101/FREN 102 (02-FL)
German	50-62	4	GRMN 101 (02-FL)
	63+	8	GRMN 101/GRMN 102 (02-FL)
Spanish	50-65	4	SPAN 101 (02-FL)
	66+	8	SPAN 101/SPAN 102 (02-FL)
History & Social Sciences			
American Government	50	3	POLS 110 (Area E2)
Educational Psychology	50	3	General Elective
Human Growth and Development	50	3	General Elective
Macroeconomics, Princ of	50	3	ECON 202
Microeconomics, Princ of	50	3	ECON 201 (Area E2)
Psychology, Introductory	50	3	PSYC 101 (Area E1)
Sociology, Introductory	50	3	SOCI 110 (Area E3)
U.S. History I	50	3	HIST 211 (Area D)
U.S. History II	50	3	HIST 212 (Area D)
Western Civilization I	50	3	HIST 100 (Area D)
Western Civilization II	50	3	HIST 100 (Area D)
Social Sciences & History	n/a	none	none
Business			
Accounting, Principles of	50	3	ACCT 211
Business Law, Intro	50	3	LAW 241
Information Sys/Computer Apps	50	3	MIS 101
Management, Principles of	50	3	MGMT 328

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

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

Our requirements for the bachelor's degree combine breadth of study in a range of subjects and disciplines, represented by the General Education Program, with specialization in a major field of study. The College offers 24 majors and numerous minors. In addition, students may take courses and complete minors in other colleges within the University, as long as prerequisites for these courses and minors are met.

Graduation Requirements

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

- a minimum of 124* credit hours with a cumulative grade point average of at least 2.00, of which at least 90 credit hours must be liberal arts course work (as defined by New York State Department of Education) for the B.A., and at least 60 liberal arts credit hours for the B.S. NOTE: a maximum of 10 Music ensemble credits and 8 PE or EQUS credits can be counted toward the 124* credits
- the requirements for the CLAS General Education Program (see below)
- the First-Year Experience (FYE) or Transfer Seminar requirement (see below)
- the requirements for a CLAS approved major
- the University Global Perspective requirement (see p.2 for more details)
- the University Lifetime Health and Wellness requirement (see p. 2 for more details)
- at least 45 credit hours in residence at Alfred University
- the final 30 credit hours in residence (for exceptions see AU policy on "Transfer of Credit")

***The 124 credit requirement is under review at the time of publication of this catalog due to the change from the long-standing PE requirement to the "Lifetime Health and Wellness" requirement.**

Transfer Credits

The following criteria apply to the evaluation of transfer records:

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

Advising

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

Upon matriculation, each student is assigned a faculty advisor. If the student has expressed an interest in a particular major at matriculation, the student will be assigned to an advisor within that major. If the student has not expressed a major interest at matriculation, he or she will begin with an advisor who will help the student to explore majors, and assigned to an advisor in the major area once the major has been formally declared. Faculty advisors are available not

only to assist in choosing courses and majors, but also to help students develop a well-rounded plan to reach individual personal and professional goals.
Good advising is collaboration. Students are ultimately responsible for making their own decisions and for meeting all requirements. Advisors encourage self-reliance, assist students in exploring opportunities at AU and beyond, and connect students to a community of resources at Alfred University.

General Education Requirements

The General Education Program, required of all students in the College of Liberal Arts and Sciences, is designed to help students hone their fundamental academic skills and expand their intellectual breadth. In addition, it creates common points of reference for students pursuing different majors. The program ensures that students have the tools they will need for advanced study and exposes them to different ways of thinking about their world. This curriculum allows students to develop the kind of intellectual flexibility they will need for meeting future challenges.

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

The General Education Program is divided into two parts: Basic Competencies and Areas of Knowledge. Students are expected to complete the Basic Competencies during the first two years of study.

Students are encouraged, although not required, to complete the Areas of Knowledge during their first two years, as this provides an opportunity for intellectual exploration as students consider which academic area they would like to focus on for their major. These requirements are normally satisfied through course work; some may be met through proficiency examinations (which carry no academic credit).

Basic Competencies

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

I. Written Communication (Attribute 01)
Each student must demonstrate writing competency through the successful completion of ENGL 102 or an equivalent (as approved by the English Division faculty). Depending on college entrance exam scores, students are placed in the appropriate level writing course. Normally students enroll in ENGL 101 and 102 in their first year in the College.

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

SAT Writing	499 or lower
SAT Verbal or SAT Read-Write	539 or lower
ACT English	25 or lower

Students with the following scores should take ENGL 102:

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

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

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

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

II. Foreign Language (Attribute 02)
Each student in the College of Liberal Arts and Sciences must successfully demonstrate competence in a language other than English equivalent to the second semester of the first year of a foreign language at the college level.
Students are expected to begin undertaking language study no later than their sophomore year and continue each subsequent semester with the language until the requirement is fulfilled. Students may also demonstrate this proficiency through a language placement exam or a challenge exam, arranged through the Division of Modern Languages, although successful completion of the Language Placement Exam does not confer academic credit.

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

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

with the Chair of the Division of Modern Languages..

To be considered for membership in Phi Beta Kappa students must have, among other qualifications, demonstrated intermediate proficiency in a foreign language through 200-level coursework or scoring 80% on the Language Placement Exam.

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

III. Quantitative Reasoning (Attribute 03)
Students must demonstrate basic competency in quantitative reasoning. The Quantitative Reasoning requirement is fulfilled by one of the following:

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

BIOL 226	Biostatistics
BUSI 113	Business Statistics
ENVS 205	Environmental Data Analysis
MATH 101	Communicating with Numbers
MATH 104	Quantitative Methods for Business
MATH 151	Calculus I
PHIL 282	Introduction to Logic
POLS/SOCI 230	Intro to Data Analysis and Statistics
PSYC 220	Psychological Methods and Statistics
SCIE 127	Doing Science

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 (Attribute) Code	Academic Field
A	Literature (4 credits required)
B	Philosophy or Religious Studies (4 credits required)
C	The Arts (4 credits required)
D	Historical Studies (4 credits required)
E	Social Sciences (8 credits; 4 credits each from two of the following categories): • Psychology (E1) • Political Science or Economics (E2) • Sociology or Anthropology (E3)
F	Natural Sciences (8 credits; at least 2 credits from F-I) • Scientific Inquiry (F-I) • Scientific Knowledge (F-II) • Science and Society (F-III)

First -Year Experience Program (FYE)

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

The goals of the FYE program are to:

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

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

Transfer Student Program

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

Majors

In addition to the General Education Program, all CLAS students must fulfill the requirements for a major to qualify for a bachelor's degree.

A major provides students with an opportunity to delve deeply into the study of a particular subject, developing expertise and critical thinking through sustained and advanced work. At least half of a student's course work toward the major must be completed at Alfred University. Transfer credits toward the major are approved by the appropriate Chair or Director, in consultation with program faculty.

Selecting a Major

Students are expected to declare their major(s) by the end of the sophomore year. We advise students to explore various options and become familiar with the requirements for a particular major before filing a major declaration. Students should also discuss their interests and objectives with their academic advisor before declaring a major.

In most cases, students have done some previous course work in the discipline before declaring the major. Faculty members are great resources for discussing possible majors. Students may even choose to pursue double majors within the College of Liberal Arts and Sciences, or double degrees in two of the colleges or schools at Alfred University. However, students interested in pursuing only one major in one of Alfred University's other colleges or schools will need to formally transfer to that college or school.

Some majors require specific sequencing of courses and careful planning, with some prerequisite courses strongly recommended for the first year. Students preparing for secondary school teaching in an area related to their major should consult with an Education advisor as well as their major advisor to plan their course of study combining major requirements and education courses.

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

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

Minors

Students are strongly encouraged to declare one or more minors to supplement the major field. A minor allows students the opportunity to broaden their educational experience and may enrich career possibilities. In addition to minors offered by the College of Liberal Arts and Sciences (listed below), many CLAS students pursue minors offered by Alfred University's other colleges and schools. The minors in business, education, and art history, in particular, complement a number of CLAS programs.

Minors normally range from 14-24 credit hours. As with the major, all courses used to complete a minor must have grades of "C" or better and at least half of the requirements should be completed at Alfred University. The appropriate division Chair should be consulted about matters regarding transfer credits for the minor. Students will also work with an advisor in the minor area in addition to the major advisor.

The requirements and other information for each of these minors begin on p. 22.

Arts Management
Astronomy
Biological Anthropology
Biology
Biopsychology
Chemistry
Coaching
Communication Studies
Computer Science
Criminal Justice Studies
Cultural Anthropology
Data Analytics
English
Environmental Studies
Equine Business Management
Exercise Science
Film Studies
French
Geology
Gerontology
Global Studies
History
Literature
Mathematics
Middle Childhood/ Adolescent Education
Philosophy
Physics
Planetary Science
Political Science
Psychology
Public Law
Religious Studies
Science Policy
Equestrian Studies
Social Justice Studies
Sociology
Sports Management
Spanish
Women's and Gender Studies
Writing

Interdisciplinary Majors and Minors

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

Requirements for the Arts Management Minor

ACCT 211	Financial Accounting	3
BUSI 485	Internship (specific to Arts Management)	4
ECON 201	Principles of Microeconomics	4
MKTG 221	Marketing Principles and Management	3
Choose one additional business course from the following:		3
BUSI 201	Family Business Management	
BUSI 439	Entrepreneurship in the 21st Century	
Choose three courses from the following, at least one from each section A and one from section B.		8-12
Total credit hours		**25-29**

Section A- History and Theory

ARTH	Art History (any course)	2-4
DANC 211	Dance History	4
ENGL 241	Survey of American Literature	4
MUSC 110	Music Appreciation	4
MUSC 211	World Music	4
PHIL 283	Philosophy of the Arts I	4
PHIL 300	Topics in Philosophy (consult advisor)	1-4
THEA 110	Introduction to Theatre	4
THEA 311	Theatre History I	4
THEA 200/300/400	Topics in Theatre (consult advisor)	1-4

Section B-Applied and Studio Skills Courses

ART 111	Beginning Drawing	4
ART 121	Beginning Sculpture	4
ART 133	Beginning Photography	4
ART 151	Beginning Ceramics	4
ART 389	Exhibition Design (open only to Art and Design students)	2
DANC	Dance (any course)	1-4
ENGL 200	Special Topics in Writing	2-4
ENGL 202	Fiction Workshop	4
ENGL 205	The Play's the Thing! - Playwriting	4
ENGL 206	Poetry Workshop	4
ENGL 472	Dramatis Personae	4
ENGL 473	Auto/Biographical Acts	4
ENGL 474	Writing the Short Story	4
ENGL 475	Writing Formal Poetry	4
ENGL 476	Writing the Long Poem	4
PDAT 120	Technical Theatre	4
PDAT 220	Prin Theatrical/Performance Design	4

THEA 230	Stage Management Fundamentals	4
THEA 240	Acting I	4
THEA 270	Play Production	1-4
THEA 200/300/400 Topics (consult with advisor)		1-4

Global Studies

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

Requirements for Global Studies major

I. Foundation Courses (Required)

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

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

3 out of 4 of the following:

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

II. Study Abroad (Recommended)

One or two semesters (consult with your advisor)

OCST 301	Study Abroad Preparation and Review	2

III. Electives

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

Categories of Electives

1. History

HIST 111	Modern Western History	4
HIST 120	The Ancient Mediterranean	4
HIST 223	Survey of German History	4
HIST 300	Topics in History (upon approval)	1-4
HIST 301	America in War during the 20th Century	4
HIST 302	The Vietnam War	4
HIST 309	Israelis, Arabs & Amer. Foreign Policy	4
HIST 310	The Ancient Greeks	4
HIST 311	The Roman World	4
HIST 316	Twentieth-Century Europe	4
HIST 322	Churchill, Stalin, Roosevelt, Hitler	2
HIST 371	American Diplomacy, 1763-1898	2
HIST 372	America as a World Power, 1898-Present	4
HIST 383	The Nazi Holocaust	2

2. Political Science

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 200/300/400 Special Topics (upon approval)		1-4

3. Economics and Business

BUSI 305	German Auto Industry	4
BUSI 457	International Business*	3
ECON 202	Principles of Macroeconomics	3
ECON 412	International Economics3	
ECON/BUSI/ FIN 200/300/400 Topics (upon approval)		3
FIN 458	International Financial Management*	3
MKTG 489	International Marketing*	3

4. Cultural Anthropology/Interdisciplinary Studies

ANTH 303	Health and Culture*	4
ANTH 304	Language and Culture*	4
ANTH 312	Violence and Culture*	4
ANTH 470	Field Work*	2-4
ANTH 495	Global Issues Seminar	4
ANTH 200/300/400 Special Topics in Anthropology		1-4
ENGR 208	Energy in the World	2
FREN 210	Global Perspectives: Paris	2
FREN 313	French-Speaking Africa	4
FREN 316	Contemporary French Culture*	4
GRMN 316	German History and Culture*	4
WGST200/300/400 Special Topics (upon approval)		1-4

5. Art/Literature/Communications

ARTH 126	Buddhist Arts of Asia	2
ARTH 127	Arts of Ancient India	2
ARTH 300/400 Topics in Art History (upon approval)		2-4
ARTH 304	Global Arts: Contemporary Asia	4
ARTH 305	South Asian Arts 15-20c	4
ARTH 306	Arts of Japan	4
ARTH 307	East Asian Design & Material Culture	4
ARTH 354	Recent Sculptural Practices	4
ARTH/WGST 382 Gender and Art History		4
ARTH 466	Histories of Photography in the Non-Western World	4
COMM 200/300/400 Topics in Communication		1-4
COMM 221	Pop Culture Goes Global	4
COMM 315	Understanding Global Media	4
COMM 325	Global Communications	4
ENGL 226	The Holocaust and Literature	4
ENGL/WGST 481 International Women Writers		4
FREN 312	French Literature II*	4
MUSC 211	World Music	4
SPAN 210	Pilgrims and Tourists Santiago	4
SPAN 212	Buenos Aires: Literature and the Arts	2
SPAN 217	Equatorial Guinean Writers	4
SPAN 218	Basque Lit. in Spain	4
SPAN 220	Literatura infantil y juvenile	4
SPAN/WGST 215 Framing Gender: Latin Amer Film		4
SPAN/WGST 216 Cuba Close Up: Film since Revolution		4
SPAN 311	Peninsular Culture and Literature I*	4
SPAN 312	Peninsular Culture and Literature II*	4
SPAN 315	Latin American Culture and Literature I*	4
SPAN 316	Latin American Culture and Literature II*	4
SPAN 400	Topics in Hispanic Literature*	1-4

6. Philosophy and Religion

RLGS 105	Introduction to World Religions	4
Total credit hours		**48-50**

***these courses have prerequisites; see course descriptions**

Upon completion of this program a student is able to:

1. Demonstrate the ability to identify, delineate and critically analyze the principal concepts and intellectual frameworks of Global Studies
2. Recognize and evaluate the varied ways in which global cultural, social, economic, political and technological forces shape the trajectories of collective groups and individuals.
3. Establish informed positions on a wide range of contemporary global challenges – such as economic development, clashing cultures, environmental degradation, violence, international terrorism – and defend their positions with logic and evidence.

4. Recognize cultural differences that mark the world's varied linguistic groups, nationalities, religions, and other distinct group identities.
5. Evaluate the quality of arguments and evidence proffered by scholars, peers, public media, and themselves.
6. Demonstrate improved oral and written communication skills.

Requirements for Global Studies minor

I. Foundation Courses (required)

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

GLBS 101	Intro to Global Studies	4

II. Electives

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

ANTH 110	Cultural Anthropology	4
HIST 107	The World in the 20th Century	4
POLS 271	World Politics	4

Eight additional credits at the 300 or 400 level from the Global Studies electives

Total credit hours 20

Individually Structured Major (ISM)

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

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

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

Some of the academic programs designed by students under the auspices of the Individually Structured Major include Art: Museum Studies and Entrepreneurship; Ecological Psychology; Historic Preservation; Integrated Emergency and Disaster Relief Operations; Media Politics; Sustainable Agriculture; Violence and Conflict Studies, and Social Justice and Popular Media.

Interdepartmental Major

The Interdepartmental Major offers students flexibility in arranging a program to suit their individual interests, aspirations, and abilities.

The program is especially appropriate for a student with definite academic objectives which do not fit into other regular programs, or when a student's objectives can be met through a broad, general course of studies. Students selecting this program must work closely with their faculty advisors to be sure their appropriate professional and career goals are met.

In addition to the other College degree requirements, students in this major select an additional 40 credit hours from those disciplines covered by the General Education Program's Areas of Knowledge (see p. 76), 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.

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 a team-taught introductory core course and the depth and autonomy of a faculty-supervised capstone experience. Students also take courses from a variety of disciplines and are strongly encouraged to take advantage of experiential learning opportunities.

Throughout the program, students work closely with faculty who participate in the Social Justice Teaching Collective. Instructors in the program meet regularly to share readings and exchange ideas, so the minor is more than a collection of isolated courses. Students learn from teachers who learn from each other.

Requirements for the minor

Required Core

SJST 101	Introduction to Social Justice Studies	4
SJST 450	Independent Study	2-4
or SJST 470	Practicum	

Completion of Social Justice Studies Portfolio

Elective Courses
Beyond the core and capstone, students complete 14 credits of electives. At least 10 elective credits must be unique to the SJST minor (i.e., not double-counting toward any other major or minor). Courses available as electives for the minor include: (All are cross-listed as "SJST" in Class Schedules)

ART 294	Art Force 5: Social Justice Outreach	2
ARTH 382	Gender and Art History	4
COMM 465	Gender, Race, Class and Media	4
CRIM 340	Concepts of Penology	4
ECON 425	Wealth and Inequality	4
ENGL 222	The Harlem Renaissance	4
ENGL 226	The Holocaust and Literature	4
ENGL 254	Women Writers	2 or 4
ENGL 256	Multicultural American Literature	4
GERO 118	Intro to Adult Development and Aging	4
HIST 307	Post World War II America	4
PHIL 304	Equality	2
POLS 316	American Constitutional Law & Politics	4
POLS 341	Modern Political Theory	4
POLS 346	American Political Thought	4
PSYC 282	Social Psychology	4
SOCI 110	Introduction to Sociology	4
SOCI 344	Sociology of Deviance	4
SOCI 346	Sociology of Sex and Gender	4
SOCI 356	Social Movements	4
SPAN 213	Argentina's Literature of Dictatorship	4
SPAN 217	Equatorial Guinean Writers	4
SPED 456	Human Development: Exceptionality	3
UNIV 115	Concepts of Service Learning	3
WGST 101	Women and Gender in Society	4

In addition, "Special Topics" courses offered in a given term are considered for the SJST designation as electives. Topics courses recently approved include:

ART 200	Constructing Culture	4
COMM 300	Public Comm and Civic Engagaement	4
ENGL 461	The 99%: Social Class in American Lit	4
FREN 300	Les Femmes et la Justice Sociale	4
Total credit hours required		**20-22**

The requirements and other information for all other majors and minors offered by CLAS begin on p.22.

Pre-Professional Advising

Art Therapy	Business
Health Professions	Law

Alfred University provides pre-professional advising for students who wish to prepare for the study of art therapy; law; or health professions, including medicine, dentistry, veterinary medicine, and other allied-health programs. Preparation for these graduate professional programs usually involves taking particular, prerequisite courses while an undergraduate. Students may choose to major in anything they wish while taking the prerequisites for these professional programs.

Students with interests in these professional programs should discuss their intentions with their academic advisor and attend workshops and advising hours offered by the faculty advisors for these pre-professional tracks. Depending on the pre-professional track chosen, students may need to start on relevant course work in their first or second year. It takes careful planning to see that both major and pre-professional requirements are completed on schedule. Students interested in pursuing graduate programs in one of the many healthcare fields should consider declaring a Pre-health Sciences Concentration.

Concentration in Pre-health Sciences
The Pre-health Sciences concentration provides students with the core science courses that are a prerequisite for application to most health-related graduate professional programs. Students interested in professions in medicine, dentistry, veterinary medicine, pharmacy, optometry and other allied health fields may want to pursue this concentration in conjunction with their major. The Pre-health Sciences Concentration, with its breadth of courses in the sciences, provides a solid foundation for advanced courses in the sciences as well as basic science preparation for health professions graduate programs.

While the Pre-health Sciences concentration meets the core science requirements expected for admission to most health-related professional schools, be aware that requirements vary among professional schools and there can be additional requirements (e.g., advanced level courses, minimum grade point average, courses in the humanities or social sciences, internships in the field, etc.).
Students are advised to familiarize themselves with these additional requirements, many of which can be fulfilled at Alfred University within the context of an undergraduate degree program.

Visit the Alfred University Pre-professional advising webpage, attend a Pre-health Professions Workshop, and talk with your advisor to take advantage of the multiple resources at AU to assist with preparation for entry into a health-related professional program.

To have this concentration recognized on the final transcript, a minimum grade point average of 3.0 in the courses that satisfy the concentration is required. (Many medical and veterinary schools expect a GPA of 3.5 or higher.)

Required Courses:

MATH151		
or MATH 152	Calculus I or Calculus II	4
One Statistics Course or a second Math Course beyond Precalculus		4
	Suggested courses: BIOL226-Biostatistics, POLS/SOCI 230-Introduction to Data Analysis and Statistics, PSYC 220-Psychological Methods and Statistics, ENVS 205-Environmental Data Analysis, MATH 152-Calculus II, MATH 381-Mathematical Statistics	
PHYS 111	Introductory General Physics I	
or PHYS 125	Physics I	4
PHYS112	Introductory General Physics II	
or PHYS 126	Physics II	4
(note: some health professional schools require a calculus-based physics course		
BIOL 150	Biological Foundations	4
BIOL 211	Cell Biology	4
BIOL 212	Genetics	
or BIOL 213	Structure and Function of Organisms	4
CHEM105	General Chemistry I	4
CHEM106	General Chemistry II	4
CHEM315	Organic Chemistry I	4
CHEM316	Organic Chemistry II	4
Total Credit Hours		**44**

Pre-professional Advising in Business – 4+1 MBA Program
Students interested in business may take courses or pursue a minor offered by Alfred University's College of Business. Completion of the minor allows students in the College of Liberal Arts & Sciences, who have successfully completed appropriate business courses while undergraduates, to be eligible to enter Alfred University's Masters in Business Administration (MBA) and complete requirements for that degree within one year of receiving the bachelor's degree. For more information about this option, contact the College of Business or the CLAS Dean's Office.

Major and Minor Requirements

Biology Division

Majors: Biology, General Science
Minors: Biology, Biopsychology, Biological Anthropology

New discoveries and innovative technologies are pushing the boundaries of what we know about ourselves and the living world. Biology 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, our 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.

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 out the curriculum, as most of our courses include experiential and applied learning opportunities. Several courses include CUREs – curriculum-based undergraduate research experiences – in which students are contributing to and collaborating on novel research questions. Research intensive electives have enrollments limited to 6-8 students, and are designed around investigative questions in the areas of animal behavior, biochemistry, cell biology, microbiology and plant biology, with each student focusing on related but independent research questions. Students enrolled in these courses have the opportunity to present research findings at regional and national meetings, or to participate in manuscript preparation.

Requirements for the major
Each student completes a core of courses and selects a prescribed number of elective courses related to his/her personal and career interests. Additional courses in chemistry, mathematics, and physics are required or recommended. All courses taken as part of the Biology major must be passed with a grade of C or better.

Summary of Requirements for the Biology Major:

Foundation and Core Courses	26
Specialization Courses	12
Related Courses	11-16
Total Credit Hours	**49-54**

Foundation and Core:
Take all courses

BIOL 150	Biological Foundations	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	Biology Research Seminar	1

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

BIOL 106	Field Botany*	4
BIOL 300	Topics in Biology	4
BIOL 302	General Microbiology	4
BIOL 307	Anatomy & Physiology: Nerves, Muscles, Bones	4
BIOL 308	Anatomy & Physiology: Viscera	4
BIOL 315	Genetics and Evolution of Populations	4
BIOL 322	Botany	4
BIOL 346	Animal Nutrition	4
BIOL 348	Animal Behavior	4
BIOL 354	Ecology	4
BIOL 357	Conservation Biology	4
BIOL 375	Comparative Vertebrate Anatomy	4
BIOL 376	Animal Physiology	4
BIOL 402	Immunology	4
BIOL 420	Biochemistry: Proteins and Metabolism	4

***BIOL 106 for major credit upon completion of special requirements**

Research Intensive Electives

BIOL 400	Research Topics	4-5
BIOL 425	Physiological Plant Ecology	4

Related Courses:

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

CHEM 105	General Chemistry I	4
CHEM 106	General Chemistry II	4
CHEM 310	Basic Organic Chemistry	
or 315/316	Organic Chemistry I and II	3-8

Upon completion of this program a student is able to:

1. Acquire, analyze, and synthesize fundamental knowledge of concepts and principles across all disciplines of biology.
2. Recognize and use language and principles appropriate to the biological discipline.
   a. Be critical listeners and articulate original questions.
3. Communicate fundamental principles as they cross boundaries of traditional biological disciplines.
   a. Effectively communicate information in multiple formats.
   b. Revise and edit work for clarity, consistence, and coherence.
4. Demonstrate thinking and reasoning appropriate to both concrete or abstract concepts.
   a. Read and discuss current literature.
5. Conduct research, construct hypotheses and/or research questions, and draw conclusions that connect new knowledge to existing knowledge.
   a. Know how to search and access biological literature.
   b. Perform general laboratory and field techniques competently and safely, including handling of living organisms.
   c. Carefully collect and keep research information (lab notebooks and data sheets).
   d. Statistically analyze and interpret data.

General Science

The General Science major is offered jointly by the Divisions of Biology, Chemistry and Physics/Astronomy.

Summary of Requirements for the General Science major:

Students must complete the breadth and depth requirements:

I. Breadth

BIOL 150	Biological Foundations	4
And take one of the following:		4
BIOL 130	Introduction to Human Genetics	
BIOL 207	Intro to Anatomy and Physiology I	
BIOL 211	Cell Biology	
CHEM 105	General Chemistry I	4
CHEM 106	General Chemistry II	4
ENVS 101	Environmental Studies I-Natural Science	4
MATH 151	Calculus I	4
MATH 152	Calculus II	4
Take two of the following:		
GEOL 101	This Dynamic Earth	4
GEOL 104	Earth and Life Through Time	4
GEOL 201	Surficial Geology	4
Take one of the following sequences of courses:		
PHYS 111/112	Introductory General Physics I and II (4 credits each)	8
or		
PHYS125/126	Physics I and II (4 credits each)	8

II. Depth

A minimum of 10 credits at the 300 level or above from the one of the disciplines represented above:	10
Total Credit Hours	**58**

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

Take both of the following courses:

BIOL 150 Biological Foundations	4
CHEM 105 General Chemistry I	4

Plus at least 16 additional credits of BIOL courses (excluding BIOL 226, 390, 450, 485, and 490), selected in consultation with a Biology advisor.

Total credit hours 24

Requirements for the Biological Anthropology minor

The interdisciplinary minor in Biological Anthropology requires foundation courses in Biology and Anthropology. The minor is intended to complement a major in another discipline. (See "Social Sciences Division" section. p. 46, for the list of required courses.)

Preparation for Middle/Adolescent Education

Future science teachers complete the Biology major (49-54 credits), and should consult with faculty advisors in Biology and Education to select appropriate courses in biology and related disciplines.

Biopsychology

You'll understand the science behind human behavior and how the body and mind work together. The best of our psychology and biology courses are combined to provide you with a well-rounded program to assist you as you pursue graduate school or a career in a science-related profession.

Requirements for the Biopsychology minor

A. Biology Core

BIOL 211	Cell Biology	4
Complete one of the following:		
BIOL 207	Introduction to Anatomy & Physiology I	4
BIOL 307	Anatomy & Physiology: Nerves/Skeleton	4
Complete one of the following:		
BIOL 130	Introduction to Human Genetics	4
BIOL 212	Principles of Genetics	4

B. Psychology Core

Take all 3 of the following:		
PSYC 311	Sensation and Perception	4
PSYC 322	Health Psychology	4
PSYC 330	Neuropsychology	4

C. Advanced Application

Take 4 credit hours from the following:		
BIPY 485	Practicum or Internship	1-4
BIPY 499	Thesis	1-4

Total credit hours 28

Preparation for Middle/Adolescent Education
Future science teachers complete the Biology major (49-54 credits), and should consult with faculty advisors in Biology and Education to select appropriate courses in biology and related disciplines.

Chemistry Division

Majors: Chemistry, ACS Approved Chemistry, General Science
Minor: Chemistry

Chemistry attempts to identify and rationalize the 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 scientifically-based issues facing today's society, knowledge of chemistry and science are essential.

The Division offers a core major and an American Chemical Society (ACS) approved degree. The core major 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 on and 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 major plus six additional semester credit hours taken from the courses below.

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 his/her studies to complement a major in other fields. For example, a biology major might emphasize organic chemistry whereas a person in ceramic engineering might focus on physical, inorganic or analytical chemistry.

Requirements for the major

CHEM 105/106	General Chemistry	8
CHEM 315/316	Organic Chemistry	8
CHEM 321	Introduction to Analytical Chemistry	4
CHEM 343/346*	Physical Chemistry I and II	7
CHEM 345	Physical Chemistry Laboratory	1
CHEM 372	Inorganic Chemistry	3
CHEM 374	Inorganic Chemistry Laboratory	1
CHEM 423	Instrumental Analysis	3
CHEM 461	Advanced Chemistry Laboratory	2
CHEM 490 **	Chemistry Seminar	0
Total credit hours		**38**

***Ceramic Engineering and Materials Science majors who also major in Chemistry may take CEMS 214, 235 and 344 for equivalent content. Other substitutions for courses in the major for students pursuing double majors can be approved by the Division on a case by case basis.**
****Enrollment in three semesters of chemistry seminar is required for all majors.**

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

Related Study Required for the Major

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

For those students who wish to earn the ACS certified degree, BIOL 150 and BIOL 211 are required prerequisites for BIOL 420.

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.

General Science
The General Science major is offered jointly by the Divisions of Biology, Chemistry and Physics/Astronomy. See p. 24 for the summary of major requirements

Requirements for the Chemistry minor

CHEM 105/106 General Chemistry	8

Plus at least 12 additional credits from the following:
CHEM 310 (may not be credited if passing grade in CHEM 315), CHEM 313, CHEM 315, CHEM 316, CHEM 321, CHEM 343, CHEM 345, CHEM 346, CHEM 370, CHEM 372, CHEM 374, CHEM 400, CHEM 423, and CHEM/BIOL 420

Total credit hours 20

***Up to a total of nine credit hours may be taken outside of the Division of Chemistry, and courses that count towards the chemistry minor outside of the Division include: CEMS 214, CEMS 235, CEMS 344, CEMS 347, CEMS 349, PHYS 401, PHYS 421, MECH 320, MECH 321, MECH 241**

Communication Studies Program

Major: Communication Studies
Minors: Communication Studies, Film Studies

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

The core courses examine elements of the process of communication in a program which is grounded in the humanistic tradition and contemporary social science. This plan of study is designed not only for students planning to pursue careers as leaders in fields such as public relations, journalism, and advertising, but also for those who wish to acquire an awareness of general communication principles applicable to many careers. Moreover, since many Communication Studies courses investigate the impact of communication upon society, the major also provides a solid foundation for graduate study in Communication and related disciplines including Law, Business, and the Social Sciences.

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

Requirements for the major

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

COMM 101	Intro to Communication Studies	4
COMM 110	Mass Media and American Life	4
COMM 205	Intro Newswriting and Reporting	4
COMM 301	Broadcasters/Advertisers/Audiences	4
COMM 309	Persuasion: Reception & Responsibility	4
COMM 410	Communication Ethics	4

Additional Requirements

Take 20 credit hours of elective courses in Communication, Social Sciences (such as Psychology or Political Science), Business (such as Management or Marketing), and Humanities (such as English), chosen in consultation with an advisor. At least 12 of these elective hours must be at the 300-400 level.

Total credit hours 44

Upon completion of this program a student is able to:

1. Identify different forms of communication and the purposes, strategies, and processes that underpin them.
   a. Recognize that communication draws from both the humanities and social sciences in its expressive, analytical and critical dimensions.
   b. Understand the roles of the components of Communication (Senders, Messages, Channels, and Receivers) as conceptualized by various models of communication.
   c. Articulate the rhetorical impact of communication in how language "creates reality."
   d. Understand the impact of communication technologies on personal, social and cultural levels.
2. Construct and deliver messages to defined and identifiable audiences.
   a. Articulate and organize written and oral messages effectively and tailor them to the mode of communication.
   b. Demonstrate an understanding of various forms of Mass Media and communication technologies.
   c. Analyze interpersonal, group, organizational, public, and mass-mediated messages.
   d. Understand the importance of audience adaptation when communicating messages.
   e. Construct and critique persuasive arguments.
3. Analyze and evaluate the purposes and impacts of human communication within and across various social contexts.
   a. Recognize the interconnectedness of interpersonal, organizational, and intercultural relationships.
   b. Articulate the role of communication in the construction of culture.
   c. Recognize how culture affects the ways in which we communicate.
   d. Understand the ethical issues in communication.
4. Apply knowledge and skills via practical experiences.
   a. Explore at least one academic discipline beyond Communication.
   b. Earn experience via experiential learning opportunities or internships.
   c. Illustrate knowledge and skills via creative and/or academic research.

Requirements for the minor in Communication Studies

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

Requirements for the minor in Film Studies

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

Select 12 credits of electives 12

Upper-level courses (300- and 400-level) preferred

COMM 216	Video Production
COMM 300	Special Topics in Film Studies*
COMM 412	Gender and American Film
COMM 426	Screenwriting
ENGL 225	Shakespeare and Cinema
MUSC 214	Reel Music in America

Total credit hours 20

***Recent special topics in Film Studies include Birth of the Movies, Journalism and the Movies, International Film and Film Noir.**

Education Division

Major: Early Childhood/Childhood Education
Minors: Adolescence Education with option to add Middle Childhood, Special Subjects: Visual Art or Business and Marketing

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.)

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

Students completing the program meet the academic requirements of the New York State Education Department for certification in Early Childhood (Birth - 2nd grade) and Childhood Education (1st - 6th grade).

The Early Childhood/Childhood Education major requires coursework in the arts and sciences that is rich in breadth and depth, and fulfills requirements in basic competencies and areas of knowledge in the following subjects: artistic expression, communication, information retrieval, humanities, language other than English, written analysis and expression, concepts in history and social sciences, and scientific and mathematical processes.

Academic Area of Concentration (or Second Major)
Students majoring in Early Childhood/Childhood Education must complete 30 credit hours in an academic area of concentration or fulfill the requirements of a second major. In either case, students select an academic area that is aligned with the current New York State Learning Standards. Possible concentration areas include Biology, Chemistry, English, Environmental Studies, Geology, History, Mathematics, Natural Science (Biology, Chemistry, Environmental Studies, Geology and Physics), Physics, Political Science, Psychology, Sociology, and Spanish. Coursework in the academic area of concentration must represent breadth (100-200 level courses) and depth (300-400 level courses) in the content area.

Prerequisite Courses

EDUC 105	Perspectives in Education
EDUC 230	Psychological Foundations of Education
EDUC 231	Social Foundations of Education
SPED 456	Human Development: Exceptionality
MATH 102	Mathematics for K-6 Teachers

Continuing Enrollment Requirements
Students may establish their major in Education upon admission to the College of Liberal Arts and Sciences. At the beginning of their junior (3rd) year, students are reviewed for continued enrollment in the Early Childhood/Childhood Education Major. At this time, students must have declared Education as their major, met with their Education advisor to ensure that all prerequisites have been met, earned an overall 2.75 GPA, and achieved a 3.0 GPA in each of the prerequisite education courses (EDUC 230 and EDUC 231). Students must also successfully complete a Progress Interview with Education faculty members before being allowed to proceed in the major.

The Education portion of the program starts in the spring semester of the student's junior year, and includes field-based coursework in early childhood/childhood curriculum, orientation, methods of teaching literacy, and integrated methodology of social studies, math, science and technology. The required concurrent field experience in two extended placements take place in area schools and is designed as an opportunity to blend theory with experiential application.

The following fall semester students are placed in area schools for two student teaching experiences. Concurrent coursework in advanced literacy methodology, and classroom assessment and evaluation strategies during this semester are designed to assist students with instructional planning and to incorporate and to align instruction, curriculum, and assessment with the New York State Learning Standards.

Students will need transportation to area school districts for both field placements (spring semester) and student teaching (fall semester) placements. Students must earn a grade of C or higher in all Education and Special Education courses, as well as in all content core courses required for teacher certification.

Core Courses
Spring Semester - Junior Year

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

Fall Semester - Senior Year

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

Education Minors: Adolescence Education (grades 7-12) with option to add Middle Childhood (grades 5-9) Special Subjects: Visual Arts or Business and Marketing (pre K - 12th grade)

Students completing these programs meet the academic requirements of the New York State Education Department for Initial certification.

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

Students who wish to minor in Education must complete coursework in the arts and sciences that is rich in breadth and depth and fulfill requirements in basic competencies and areas of knowledge in the following subjects: artistic expression, communication, information retrieval, humanities, language other than English, written analysis and expression, concepts in history and social sciences, and scientific and mathematical processes.

Preparation for a teaching certification in Adolescence Education combines an academic major in a particular field, such as English or Biology, with an Adolescence minor in the Division of Education. Adolescence Education subjects include Biology, Chemistry, Earth Science, English, Mathematics, Physics, Social Studies, and Spanish; students must be enrolled in the College of Liberal Arts and Sciences in one of these majors.

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

Students seeking certification in Visual Arts must be enrolled in the BFA program in the School of Art and Design or the Interdisciplinary Art program in the College of Liberal Arts and Sciences and minor in Education. A student preparing to teach in one of these areas should meet with an advisor in the Division of Education to integrate the education course requirements while planning a program of major studies.

Prerequisite Courses

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

Continuing Enrollment for Education Minors

In year 1, students are encouraged to declare their minor in Education and complete the prerequisite courses (EDUC 230 and EDUC 231). The semester prior to taking the appropriate Methods course (EDUC 489 or 491), students are reviewed for continued enrollment in the Education Minor. At this time, students must have declared Education as their minor and met with their Education advisor to ensure that all prerequisites have been met, that they have an overall 2.75 GPA, and have achieved a 3.0 GPA in each of the prerequisite education courses (EDUC 230 and EDUC 231). Students must also successfully complete a Progress Interview with Education faculty members before being allowed to proceed in the minor.

Course Requirements

- Completion of Basic Competencies and Areas of Knowledge required for Liberal Arts and Sciences.
- Completion of appropriate academic major in the College of Professional Studies, College of Liberal Arts and Sciences, or School of Art and Design.

Adolescent and Business Education Specific Pedagogical Core

EDUC 345	Education Fieldwork	3
EDUC 405	Literacy in the Content Areas	3
EDUC 413	Using Literature in Intermediate/ Adolescent Classrooms	3
EDUC 460	Seminar in Teaching and Professional Development	3
EDUC 462	Student Teaching for Middle/ Adolescent Certification	12
EDUC 489	Current Teaching Methods: Middle Childhood/Adolescence Subjects	3
SPED 456	Human Development: Exceptionality	3

Plus specific general education core courses required for each New York State teacher certification.

Middle Childhood Certificate

Those Adolescent education students who wish to earn an additional certification in Middle Childhood must also complete EDUC 488 - Current Teaching Methods: Middle Childhood Subjects as well as additional fieldwork and student teaching hours in Middle Childhood placements.

Visual Arts Specific Pedagogical Core

EDUC 345	Education Fieldwork	3
EDUC 405	Literacy in the Content Areas	3
or EDUC 413	Using Literature in Intermediate/ Adolescent Classrooms	3
EDUC 464	Seminar: Teaching & Profess Develop in 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

Plus specific general education core courses required for New York State teacher certification.

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

Examinations:
**Academic Literacy Skills Test (ALST):*
Must be passed prior to Progress Interview
**Content Specialty Test (CST):*
The appropriate Content Specialty Test(s) for the appropriate developmental level(s) and certification area(s) must be passed prior to Progress Interview
**Educating All Students (EAS):*
Must be passed prior to student teaching
**Teacher Performance Assessment (edTPA):*
Completed during the student teaching semester; must be passed before a student will be recommended for certification

New York State Mandated Workshops:
All students must complete state required workshops in Child Abuse Identification and Reporting, School Violence Prevention and Intervention, and Training in Harassment, Bullying, Cyberbullying, and Discrimination in Schools: Prevention and Intervention (Dignity for All Students).

Fingerprinting/Background Check:
Program candidates applying for Initial (first) certification must complete a fingerprinting/background check. Fingerprinting information can be obtained from the Division of Education office.

English Division

Major: English
Minors: English, Literature, Writing

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

The mission of the Division of English is to offer instruction in the western canon and non-canonical and world literatures, integrating these studies with creative writing courses in poetry, fiction, nonfiction and playwriting. The Division of English is dedicated to the teaching of analysis, critical reflection and creative thought, problem solving, and communication within the context of a liberal arts education in order to meet the complex needs of a diverse university community.

We encourage students to recognize the intellectual, social, and historical contexts of human experience, demonstrating how we might question and articulate the values, ideologies, and assumptions inherent in any human enterprise. We are also committed to teaching all university students the analytic writing skills they need in order to articulate a cultural literacy in an ever-shrinking, diverse world.

The major serves both the student who regards the study of English as a vital component of a liberal arts education and the future critic and writer.

English majors graduate to pursue careers in teaching, writing, advertising, public relations, publishing, college administration, business, and related fields, or they go on to graduate schools in literature, writing, communications, journalism, library science, law, and business.

English majors are encouraged to assume responsibility for the direction of their education by developing a course of study based on their goals. From the numerous courses offered (see listings in the back of catalog), a total of 44 semester hours in English is required.

Requirements for the English Major

One 200-level literature class ("A" Area of Knowledge)		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		26
Total Credit Hours		**44**

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.

Upon completion of this program a student is able to:
1. Articulate in discussion and on paper how texts communicate more than their surface-level meanings
2. Identify dominant themes and concerns in the subject matter
3. Use historical, literary, and critical contexts to analyze texts
4. Recognize conventions associated with different genres and explain the significance of those conventions
5. Effectively support analytical claims with textual evidence
6. Put texts in dialogue, finding their shared assumptions and points of departure
7. Use writing to discover (not just report) what they think.

Minors
The English Division offers minors in English, Literature, and Writing. For students wishing to complete more than one minor offered by the English Division, each minor must have at least 12 unique credits.

Requirements for a minor in English:

Any 200-level writing or literature course in English	4
ENGL 325/326 Surveys of British Literature I & II *or* ENGL 327 Survey of American Literature *or* ENGL328 Language of Literary Art	4-6
400-level writing and/or literature coursework*	10-12
Total Credit Hours	**20**

Requirements for a minor in Literature:

One 200-level literature class ("A" Area of Knowledge)	4
ENGL 325/326 Surveys of British Literature I & II *or* ENGL 327 Survey of American Literature	4-6
400-level coursework in literature*	10-12
Total Credit Hours	**20**

Requirements for a minor in Writing:

One 200-level creative writing class	4
ENGL 328 The Language of Literary Art	4
400-level writing courses*	12
Total Credit Hours	**20**

***Note: ENGL 450-Independent Study does not count toward any of the minors (English, Literature, Writing)**

Environmental Studies and Geology Division

Majors: Environmental Studies, Geology
Minors: Environmental Studies, Geology, Planetary Science

Environmental Studies

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

The Environmental Studies major offers a multidisciplinary background and encourages looking at environmental problems from several points of view. Environmental projects and field experiences augment classroom learning.

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

The primary missions of the Environmental Studies Program at Alfred University are to educate our students and to engage in research that furthers our understanding of the natural environment. These two activities are mutually supportive.

Our approach toward teaching and research is to integrate the several disciplines in the natural and social sciences and humanities that make up the field. We practice the team approach taken in modern environmental problem solving in both teaching and research. Our students learn to tackle environmental problems as a team of experts, each contributing his/her own specialty to the group effort.

We use contemporary methods of "learning by doing" and team-teaching to provide our students with a multi-faceted, practical foundation that they can build on with advanced study or work experience. We strive to provide the latest technologies for our students, and orient our curriculum in such a way as to give them experience using contemporary procedures, approaches, techniques, and instruments. We expect our students to graduate with a good understanding of theoretical aspects of our field and the ability to apply that understanding to practical situations. Our goal is to prepare students for rigorous graduate programs and/or to be successful in a competitive job market.

Our faculty engage in scholarly activities that lead to a better understanding of the environment and the effects that humans have on the environment. We often work on research projects in teams and expect our students to be involved in research with us whenever possible, depending on the nature of specific research projects.

When appropriate, we use our expertise to benefit the local community and undertake research projects with our students that will have a positive impact on the local environment.

Requirements for the major – Natural Science Emphasis

A. Core requirements

ENVS 101	Environmental Studies I – Natural Science	4
ENVS 205	Environmental Data Analysis	4
or POLS/SOCI 230	Introductory Data Analysis and Statistics	
or PSYC 220	Psychological Methods & Statistics	
or BUSI 113	Business Statistics	
ENVS 206	Fieldcraft-Outdoor Proficiency	4
ENVS 214	Environment, Politics and Society	4
ENVS 220	Introduction to GIS	4
ENVS 240	Environmental Research Procedures I	3
ENVS 241	Environmental Research Procedures II	3
ENVS 360	Junior Seminar	1
ENVS 415	Natural Resource Management	3
ENVS 440	Environmental Research Planning	2
ENVS 490	Senior Seminar	2
ENVS 499	Senior Year Project	2-4

B. Breadth requirements

One course from among the following:

BIOL 150	Biological Foundations	4
CHEM 105	General Chemistry I	4
GEOL 101	This Dynamic Earth	4
PHYS 111	Introductory General Physics I	4
or PHYS 125	Physics I	

Two courses from among the following:

ANTH 110	Cultural Anthropology	4
ECON 201	Principles of Microeconomics	4
ECON 312	Environmental Economics	3
ENGL 293	Literature and the Environment	4
ENVS 201	Environmentalism	2
ENVS 204	Environmental History	2
ENVS 245	Spirituality and the Environment	2-4
HIST 308	Americans and Their Environment	4
PHIL 281	Ethics	4
POLS 345	International Environmental Politics	4
POLS 411	Bureaucracy	4

C. Natural Science emphasis electives

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

BIOL 322	Botany	4
BIOL 354	Ecology	4
CHEM 106	General Chemistry II	4
CHEM 310	Basic Organic Chemistry	3
or CHEM 315	Organic Chemistry I	4
CHEM 316	Organic Chemistry II	4
CHEM 321	Introduction to Analytical Chemistry	4
ENVS 300	Special Topics	1-4
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 301	Structural Geology	4
GEOL 307	Stratigraphy and Sedimentation	4
GEOL 464	Hydrogeology	4
PHYS 112	Introductory General Physics II	4
or PHYS 126	Physics II	

Requirements for the major – Social Science Emphasis

A. Core requirements

ENVS 101	Environmental Studies I – Natural Science	4
ENVS 205	Environmental Data Analysis	4
or POLS/SOCI 230	Intro Data Analysis and Statistics	
or PSYC 220	Psychological Methods & Statistics	
or BUSI 113	Business Statistics	
ENVS 206	Fieldcraft – Outdoor Proficiency	4
ENVS 214	Environment, Politics and Society	4
ENVS 220	Introduction to GIS	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	2
ENVS 440	Environmental Research Planning	2
ENVS 490	Senior Seminar	2
ENVS 499	Senior Year Project	2

B. Breadth requirements

One course from among the following:

BIOL 150	Biological Foundations	4
CHEM 105	General Chemistry I	4
GEOL 101	This Dynamic Earth	4
PHYS 111	Introductory General Physics I	4
or PHYS 125	Physics I	

C. Social Science emphasis electives

16 credits from among the following:

ANTH 110	Cultural Anthropology	4
ECON 201	Principles of Microeconomics	4
ECON 202	Principles of Macroeconomics	3
ECON 312	Environmental Economics	3
ENGL 293	Literature and the Environment	4
ENVS 201	Environmentalism	2
ENVS 204	Environmental History	2
ENVS 245	Spirituality and the Environment	2-4
ENVS 320	Advanced GIS Applications	4
HIST 308	Americans and Their Environment	4
PHIL 281	Ethics	4
POLS 313	State and Local Politics	4
POLS 411	Bureaucracy	4
PSYC 282	Social Psychology	4

Requirements for the major – Environmental Science Track

A. Core requirements

ENVS 101	Environmental Studies I-Natural Science	4
ENVS 205	Environmental Data Analysis	4
or POLS/SOCI 230	Introductory Data Analysis and Statistics	
or PSYC 220	Psychological Methods & Statistics	
or BUSI 113	Business Statistics	
ENVS 206	Fieldcraft – Outdoor Proficiency	4
ENVS 214	Environment, Politics and Society	4
ENVS 220	Introduction to GIS	4
ENVS 240	Environmental Research Procedures I	3
ENVS 241	Environmental Research Procedures II	3
ENVS 360	Junior Seminar	1
ENVS 440	Environmental Research Planning	2
ENVS 490	Senior Seminar	2
ENVS 499	Senior Year Project	2
MATH 151	Calculus I	4

B. Breadth requirements

Four courses from the following:

BIOL 150	Biological Foundations	4
CHEM 105	General Chemistry I	4
CHEM 106	General Chemistry II	4
GEOL 101	This Dynamic Earth	4
MATH 152	Calculus II	4
PHYS 111	Introductory General Physics I	4
or PHYS 125	Physics I	
PHYS 112	Introductory General Physics II	4
or PHYS 126	Physics II	

C. Depth requirements

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

BIOL 322	Botany	4
BIOL 354	Ecology	4
CHEM 310	Basic Organic Chemistry	3 or 4
or CHEM 315	Organic Chemistry	
CHEM 321	Introduction to Analytical Chemistry	4
ENVS 300	Special Topics	1-4
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 464	Hydrogeology	4

Requirements for the Environmental Studies minor

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

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

Total credit hours **22**

Note: Nearby Alfred State College offers a number of applied courses in a variety of environmental areas. With permission, selections from among these offerings may be taken through a cross-registration agreement. Advisors can assist in such course selections; in some cases these may substitute for courses listed above.

Upon completion of this program a student is able to:

1. Critically examine contemporary environmental issues.
2. Apply theoretical concepts to actual problems or issues
3. Construct well-structured natural and/or social science research projects
4. Work as a member of a team to solve an environmental problem or explain an environmental issue.

Geology

Studying geology helps students to gain an appreciation for their planet, its history, and the processes which operate within it. Students may select courses for enjoyment, choose courses in conjunction with other studies, or take courses in preparation for careers in geology. The major

provides a background useful for employment or further studies in geology or a related field such as environmental studies, physical geography, planning, engineering, law or business. A geology major includes an introductory level course; required courses in structural geology, surficial geology, mineralogy and petrology; advanced studies; and field experience.

The Geology Program's mission is to provide students in all geoscience courses (major or non-major) with an appreciation and understanding of the earth's physical environment (geosphere, hydrosphere, atmosphere) and the interconnectedness between these systems. Because there are many aspects of the earth and its history that cannot be directly observed, part of our mission is to instill in our students an understanding of how the present models explaining the structure, composition, and history of the earth were derived.

Students in geology courses will gain basic knowledge and skills that will allow them to pursue professions in a variety of areas of geoscience, including teaching, graduate school, industry, government, and private consulting.

Requirements for the Geology major

Choose one introductory course from:		4
GEOL 101	This Dynamic Earth	
GEOL 103	Earthquakes and Volcanoes	
GEOL 104	Earth and Life Through Time	
GEOL 106	Elementary Oceanography	
and take the following four courses:		
GEOL 201	Surficial Geology	4
GEOL 301	Structural Geology	4
GEOL 302	Mineralogy and Petrology	4
GEOL 464	Hydrogeology	
or ENVS 351	Environmental Biogeochemistry	4
Total Geology Core Credit Hours		**20**

General Geology Track:

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

ENVS 205	Environmental Data Analysis	4
GEOL 206	Fieldcraft–Outdoor Proficiency	4
ENVS 220	Introduction to GIS	4
and 8 credits selected from the following:		
ENVS 320	Advanced GIS Applications	4
ENVS 351	Environmental Biogeochemistry (if not used above)	4
GEOL 307	Stratigraphy and Sedimentation	4
GEOL 408	Tectonics	4
GEOL 414	Geophysics	4
GEOL 464	Hydrogeology (if not used above)	4
Total Credit Hours for General Track Major		**40**

Planetary Science Track

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

ASTR 302	Planetary Science	2
CHEM 105	General Chemistry I	4
CHEM 106	General Chemistry II	4
MATH 151	Calculus I	4
MATH 152	Calculus II	4
and 8 credits selected from the following:		
CEMS 235	Thermodynamics of Materials	4
CEMS 251	Mechanics of Materials	3
or MECH 241	Mechanics of Materials	
CHEM 343	Physical Chemistry I	4
CHEM 346	Physical Chemistry II	3
GEOL 408	Tectonics	4
GEOL 414	Geophysics	4
GEOL 464	Hydrogeology (if not used above)	4
Total Credit Hours for Planetary Science Track Major		**46**

Earth Science Education Track

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

MATH 102	Mathematics for Teachers K-6	4
GEOL 206	Fieldcraft–Outdoor Proficiency	4
and 8 credits selected from the following:		
ASTR 103	Introductory Astronomy	4
ASTR 107	Elementary Astronomy Lab	2
ENVS 220	Introduction to GIS	4
ENVS 320	Advanced GIS Applications	4
ENVS 351	Environmental Biogeochemistry (if not used above)	4
GEOL 307	Stratigraphy and Sedimentation	4
GEOL 408	Tectonics	4
GEOL 414	Geophysics	4
GEOL 464	Hydrogeology (if not used above)	4
SCIE 110	Weather Elements	2
Total Credit Hours for Earth Science Education Track Major		**36**

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

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

Requirements for the minor in Geology

A Geology minor may be obtained by completing (with grades of "C" or better), one 100-level geology course and 16 credit hours of upper level geology courses. These may include ENVS 320 or ENVS 351.

Total credit hours required **20**

Requirements for the Minor in Planetary Science

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

ASTR 302*	Planetary Science	2
Select 12 credit hours from the following		
ASTR 103	Introductory Astronomy	4

ASTR 107	Elementary Astronomy Lab	2
ASTR 307	Observational Astronomy	2
GEOL 101	This Dynamic Earth	4
GEOL 110	Lunar Geology	2
GEOL 201	Surficial Geology	4
GEOL 210	The Geology of Venus	2
GEOL 408	Tectonics	4
Total Credit Hours		**14**

Equestrian Studies Program

Minors: Equestrian Studies, Equine Business Management

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.

Requirements for the minor in Equestrian Studies

The minor requires a total of 16 credit hours. Choose at least 8 credits of theory courses and 4 credits of practical (activity) courses. The remaining 4 credits may be selected from either category.

Theory Courses

EQUS 201	The Art and Theory of Equitation	4
EQUS 205	Introduction to Equine Science	4
EQUS 212	Methods of Teaching	4
EQUS 215	Equine Business Management	4
EQUS 216	Horse Show Management	2
EQUS 218	Judging Horse Shows	4
EQUS 220	History of the Horse	4
EQUS 223	Hunter and Jumper Course Design	2
EQUS 225	Equine Nutrition	2
EQUS 226	Caring for the Equine Anatomy	2
EQUS 200	Special Topics (theory topics)	1-4
EQUS 228	The Equine Industry in Ireland	2

Activity Courses (2 credit hours each)

EQUS 100	Special Topics (activity course for PE credit)
EQUS 101-104	English Riding, Levels I, II, III, IV
EQUS 105	Introduction to Dressage
EQUS 107	Combined Training
EQUS 110-113	Western Riding, Levels I, II, III, IV
EQUS 115	Dressage II
EQUS 118	Introduction to Reining
EQUS 119	Introduction to Reined Cowhorse
EQUS 120-122	Driving I, II, III
Total credit hours	**16**

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 the Equestrian Studies Program and the College of Business.

Equine Business Management Minor Requirements

ACCT 211	Financial Accounting	3
BUSI 439	Entrepreneurship in the 21st Century	3
EQUS 215	Equine Business Management	4
MKTG 221	Marketing Principles and Management	3
MKTG 482	Sales Management	3
Plus a minimum of six (6) credit hours chosen from:		
EQUS 200	Special Topics (theory topics)	1-4
EQUS 205	Introduction to Equine Science	4
EQUS 216	Horse Show Management	2
EQUS 218	Judging Horse Shows	4
EQUS 223	Hunter and Jumping Course Design	2
Total credit hours		**22**

Health and Human Performance Division

Majors: Athletic Training, Health Fitness Management
Minors: Coaching, Exercise Science, Sports Management

Students interested in careers in the growing fields of health, wellness, and athletics have choices at Alfred University. The College of Professional Studies offers Bachelor of Science degrees in Athletic Training and Health and Fitness Management and minors in Exercise Science and Sports Management (jointly offered by the School of Business). These programs provide interested students with the opportunity for concentrated study and clinical work experiences, preparing them for careers within the health and wellness professions. Students who desire careers in healthcare fields such as chiropractic, physical therapy, or physician's assistant, can work with their advisors to complete prerequisites for these graduate programs.

Athletic Training Program

The Athletic Training Program (ATP) is based on a Bachelor of Science degree in Athletic Training, plus fulfillment of all requirements for the Athletic Training Board of Certification (BOC) exam. Upon passing the BOC exam, the student will attain the qualification of a Certified Athletic Trainer.

Mission and Goals

The mission of the Athletic Training Program (ATP) at Alfred University is to provide the student with knowledge, standards, behavior models, code of ethics, and skills needed as an Athletic Trainer. The professional program is based on a solid foundation in allied health care arena, with a strong emphasis in the professional domains as outlined by the role delineation study

Goals of the ATP Program are as Follows:
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. Encourage participation in the National Athletic Trainers' Association, New York State Athletic Trainers' Association, Eastern Athletic Trainers' Association, and other professional organizations, that will further enhance the students' educational opportunities.
5. Provide the educational means of developing knowledge in Cognitive, Affective and Psychomotor domains and Clinical Proficiencies.

Accreditation
Alfred University's Athletic Training Program is accredited by the Commission on Accreditation of Athletic Training Education (CAATE). The program has been placed on Probation as of February 19, 2016 by the CAATE, 6850 Austin Center Blvd., Suite 100, Austin, TX 78731-3101. The action was taken as the three-year aggregate average of first-time passing scores on the BOC exam has fallen below 70%. Removal of probationary status by CAATE will occur once the three-year aggregate first-time pass rate meets or exceeds the CAATE standard of 70%.

Program Acceptance Process
Students who are admitted to the Athletic Training major through the admissions application to Alfred University as first year students must successfully complete first year program requirements for full acceptance into the Athletic Training program. During the first year students enroll in the Athletic Training Basic Program (ATBP), complete a Technical Standards for Admission form, OSHA and HIPAA training, and a minimum of 50 clinical hours observing in the athletic training room under direct supervision of a certified staff athletic trainer. Upon successful completion of these program components, student can apply for full acceptance into the Athletic Training Program.

The directed observation period is comprised of two semesters. The emphasis in clinical directed observation is on the orientation and development of knowledge of the respective roles of Athletic Training personnel, and limited performance and/or direct application of technical skills and knowledge. Students are given an opportunity to observe athletic trainers working in these domains:

- Injury/Illness Prevention and Wellness Protection
- Clinical Evaluation and Diagnosis
- Immediate and Emergency Care
- Treatment and Rehabilitation
- Organization and Professional Health and Well-being

Near the end of the mandatory directed observation period, the prospective athletic training student may apply for acceptance into the Athletic Training Program (ATP). Application to the ATP level consists of submission of a résumé, immunization records, proof of a physical examination from a physician, intent to enroll, three letters of recommendation, transcripts, and evidence of successful completion of all requirements of the ATBP. Interviews with the program faculty are also required. In order to be considered for acceptance into the ATP the student must:

- have a cumulative grade-point average of 2.75 with a grade-point average of 3.00 or better in the courses included within the ATBP
- provide proof of current American Red Cross First Aid, CPR and AED For the Professional Rescuer certifications or certification as an Emergency Medical Technician.
- provide proof of Hepatitis-B vaccination or declination statement
- provide proof of physical examination by a physician
- complete an Athletic Training Program Technical Standards for Admission form
- complete an Athletic Training Program Application
- submit three (3) letters of recommendation
- undergo a formal interview with AU ATP faculty
- completion of 50 verified hours of supervised clinical experience and observation at Alfred University or approved affiliate
- active member of the Alfred University Athletic Training Club
- maintain student membership in the National Athletic Trainers' Association
- completion of required program forms as outlined on the ATP application checklist

Alfred University and the Division of Health and Human Performance are committed to the highest principles of academic and personal integrity concerning the application and admissions process of the Athletic Training Program. Therefore, an athletic training student may be given provisional acceptance or denied altogether based upon any of the following grounds:

- a cumulative grade-point average lower than 2.75
- a cumulative ATBP grade-point average lower than 3.0 or a grade below a "C" in any of the ATBP courses
- incomplete application (missing one or any of the following: letter of application, résumé, letters of recommendation, transcripts
- failure to complete basic athletic training competencies
- lack of a minimum of 50 hours of accepted verified clinical experience
- failure to provide adequate proof of first aid/CPR/AED certification
- failure to provide proof of Hepatitis-B vaccination or declination statement
- failure to complete required program application forms
- Complete and successfully pass the entrance examination.

Entrance Examination Policy
All students applying for acceptance into the Alfred University Athletic Training program will be required to take the entrance examination. The examination will evaluate students' knowledge of basic entry level skills taught in ATHT 103, 105, 110, & 111. Students will be required to pass the examination with minimum score of 75%. Students failing to meet the required 75% will be allowed one additional attempt. The scores will not be used as the only criterion for acceptance into the program, but will provide additional information to the selection committee.

Provisional Admission
Special circumstances may arise where a student may be accepted provisionally to the Alfred University Athletic Training Program, based on one of the conditions listed above. This category of acceptance is only utilized when students are extremely close to meeting a specific admission criterion. Athletic training students accepted on a provisional status will be notified in writing. In this instance, students will be given very clear objective criteria, which must be satisfied for full acceptance. The student-specific set of goals/criteria must be met during the succeeding semester in order to maintain their position in the Athletic Training Program. During this time, the student must demonstrate continued progress toward the goal and eventual achievement. If the criterion is not met within the

allotted time, the athletic training student will be downgraded to non-accepted status. This student must then re-apply to the program for re-acceptance.

Second-Chance Provision
A student not accepted into the Alfred University ATP may reapply. This opportunity is intended for those who failed to gain admission on their first attempt. The student must formally submit a request to exercise the second chance provision. This request must be submitted no more than one (1) month after receipt of the denial notification. If not submitted in due time, the student waives the right to second chance provision and must reapply by means of the Athletic Training Program Admission policy.

The second chance provision consists of one additional semester for the student to demonstrate that he or she is capable of meeting the entrance requirements. The exact requirements to be met will be outlined in the letter of denial. Students will then submit a letter detailing how the deficiencies have been successfully addressed since denial of admission, have a follow-up interview with the Division of Athletic Training faculty/staff and submit two additional support letters of recommendation.

Appeals Process
Students not accepted into the ATP have the right to appeal to the Division of Athletic Training Program Director. It is anticipated that admission to the program by this route will be rare except in extenuating circumstances. A letter of appeal must be submitted no later than one (1) month following denial. It must detail the grounds for appeal. The letter will be reviewed by the Athletic Training Appeals Committee (comprised of the Program Director, full-time Division of Athletic Training faculty/staff and the Dean of the College of Professional Studies) and ruled upon. The Division of Athletic Training faculty/staff reserves the right to determine the propriety of grounds for appeal based on the facts presented on a case-to-case basis.

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

Student Transfer Policy
First-year or sophomore athletic training students applying for transfer to Alfred University from another institution having prior athletic training clinical experience must also complete the aforementioned criteria for acceptance (ATBP prerequisites including 50 supervised clinical experience hours). If a student transfers with prior athletic training clinical experience, she/he may petition to have the 100 hour directed observation requirement prorated, accordingly. The candidate must submit a letter of recommendation documenting his/her clinical experience hours from his/her former supervising certified athletic trainer. Once completing the prerequisite courses, the student may apply (following the application process outlined) for admission into the Athletic Training Program (ATP). These prerequisite courses must be taken at Alfred University; therefore, credit for these courses may not transfer from another institution. All transfer students will be evaluated on an individual basis for admittance to the ATBP.

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

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

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

Curriculum Requirements for BS in Athletic Training
Students complete the Basic Program and the Athletic Training Program (below), the College of Professional Studies General Education Program, the University Physical Education and Global Perspective Requirements, and enough electives to reach at least 124 credit hours.

AT Basic Program Course Requirements (ATBP):

ATHT 103	Prevention and Care of Athletic Injuries	4
ATHT 103L	Lab- Prevention& Care of Athletic Injuri	0
ATHT 104	Introduction to Clinical Experience	1
ATHT 105	Perspectives on Athletic Training	1
ATHT 110	Medical Sciences	2
ATHT 111	Emergency Medicine in Athletic Training	3
ATHT 111L	Lab-Emergency Med in Athletic Training	0
ATHT 205	Structural Kinesiology	3
ATHT 205L	Lab – Structural Kinesiology	0
ATHT 210	Advanced Athletic Training	3
Total credit hours		**17**

Athletic Training Continuing Program Requirements:

ATHT 190	Princ of Strength Training/Reconditioning	2
ATHT 201	Clinical Experience in Athletic Training I	1
ATHT 202	Clinical Experience in Athletic Training II	1
ATHT 215	Personal Health and Wellness	2
ATHT 222	Nutrition for Human Perf/Exercise	2
ATHT 265	Therapeutic Applications I	3
ATHT 265L	Lab – Therapeutic Applications I	0
ATHT 276	Therapeutic Applications II	3
ATHT 276L	Lab – Therapeutic Applications II	0
ATHT 301	Clinical Experience Athletic Training III	1
ATHT 302	Clinical Experience Athletic Training IV	1
ATHT 310	Orthopedic Procedures	2
ATHT 334	Physical Eval of the Lower Extremity	3
ATHT 334L	Lab-Physical Eval of the Lower Extremity	0
ATHT 348	Physical Eval of Upper Extremity	3
ATHT 348L	Lab- Physical Eval of Upper Extremity	0

ATHT 392	Biomechanics	2
ATHT 393	Physiology of Exercise	3
ATHT 401	Clinical Experience Athletic Training V	1
ATHT 403	Medical Aspect of Athletic Training	1
ATHT 420	Pharmacology	2
ATHT 432	Organization and Admin of Athletics	2
ATHT 459	Research Design in Athletic Training I	2
ATHT 469	Research Design in Athletic Training II	1
ATHT 485	Clinical Internship in Athletic Training	4
ATHT 490	Senior Seminar in Athletic Training	1
ATHT 495	Current Topics in Athletic Training	2
BIOL 207	Human Anatomy & Physiology/Lab I	4
BIOL 208	Human Anatomy & Physiology/Lab II	4
BIOL 150	Biological Foundations	4
CHEM 105	General Chemistry I	4
COMM 101	Introduction to Communication Studies	4
or COMM 210	Interpersonal Communication	
or COMM 302	Public Relations Principles	
or COMM 409	Organizational Communication	
PSYC 101	Introduction to Psychology	4
PSYC 220	Psychological Statistics and Methods	4
or POLS 230	Intro to Data Analysis and Statistics	
or SOCI 230	Intro to Data Analysis and Statistics	
PSYC 322	Health Psychology	2-4
PSYC 330	Neuropsychology	4
Total credit hours		**78-80**

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

Preceptor Assignments
While enrolled in Clinical Experiences I-V the athletic training student will be assigned to a Clinical Preceptor. Each preceptor is responsible for a specific athletic team or clinical patient load. The athletic training student is responsible for attending all scheduled practices and home competitions and other assigned clinical times as mandated by the individual preceptor.

Each student will be given the opportunity to obtain hours within the parameters of upper extremity, lower extremity, general medical and equipment intensive environments that also encompass varying patient genders and ages.

Absences from Assigned Duties
An *Absence from Clinical Assignment* form must be completed by any athletic training student a minimum of three (3) days before a missed practice or competition. The form will be reviewed by the appropriate preceptor and returned within 24 hours with a verdict. If the absence is excused, the athletic training student is responsible for finding a qualified athletic training student replacement and notifying the appropriate preceptor. If an absence is unexcused, the athletic training student will be subject to the disciplinary policy outlined in the Athletic Training Student Handbook. Students must also remain active when obtaining clinical hours. A minimum of 5 clinical hours per-week are required for successful completion of the enrolled Clinical Experience course.

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

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

Senior Comprehensive Examination Policy
As part of an ongoing effort by the Alfred University Athletic Training Program (AU ATP) to ensure students are prepared to take the BOC, Inc. examination at the end of their senior year, the AU ATP has created a senior comprehensive examination. The examination is designed to evaluate the student's knowledge of entry level athletic training skill and knowledge. The examination will be used to assist the AU ATP in determining a candidate's readiness for certification. With current mandates set forth by the Commission on Accreditation of Athletic Training Education, the AU ATEP will be required to document and demonstrate a 70% first time pass rate on the BOC, Inc. examination. As a result, only qualified and prepared students will be endorsed for this examination prior to graduation.

The senior comprehensive exam will consist of both a 200 question written test and a practical examination on **all** Athletic Training courses and clinical experiences taken within the AUATP. Students will have two opportunities to pass the senior comprehensive exam. Failure to pass this exam on the second attempt will disqualify students from being endorsed by the Program Director to take the BOC, Inc. exam prior to graduation.

Students must receive scores of 75% or better on the written and practical exam separately before they can be endorsed by the Program Director and therefore, eligible to take the BOC, Inc. examination. The grades for the written and practical exam will be calculated into the student's grade for ATHT 490 Senior Seminar in Athletic Training.

Sophomore and Junior Review:
At the end of the each semester of the sophomore and

junior year, students will be evaluated through either clinical experience evaluations, academic review or comprehensive examination. . Students not meeting the requirements set by the program will be placed on probation. The comprehensive examination will be offered at the end of the year will be a portion of the grade for either ATHT 202 or ATHT 302. Students must obtain a score of 75% or better in order to successfully pass the enrolled clinical experience course.

Additional Program Costs:
There are costs associated with being enrolled in the ATP that are in addition to typical university costs such as tuition, room, board, and books. Typical fees associated with the ATP include but are not limited to: lab fees, personal liability insurance, immunization maintenance, apparel to adhere to dress code(s), student membership fees for the National Athletic Trainers Association during sophomore, junior and senior years in the program, and travel to and from off-campus clinical assignments and internships. A specific breakdown of additional program costs can be found on the Division's homepage.

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

Health Fitness Management

The Bachelor of Science (B.S.) in Health Fitness Management combines health studies with biology and science foundations and business concepts. The program includes a field experience and internship sequence, which provides the opportunity for guided clinical practice working with client populations in real world settings. The coursework and field experiences are designed so that graduates of the Health Fitness Management program will have fulfilled educational requirements for certifications from the National Strength and Conditioning Association (NSCA), the American College of Sports Medicine (ACSM), and the National Academy of Sports Medicine (NASM). Students graduating as health and fitness managers may pursue careers in corporate wellness, public and private fitness and wellness, or special population fitness and wellness. Students will also be prepared for a variety of health-related graduate studies, ranging from Physical Therapy to Exercise Science.

Mission and Goals

The mission of the Health Fitness Management major at Alfred University is to provide the student with knowledge, standards, behavior models, code of ethics, and skills needed as a fitness and wellness professional. Combining health and sciences studies with a basic business background, students will be prepared for careers in a variety of health or fitness settings.

Goals of the Program include:
1. Provide a quality, up-to-date educational curriculum.
2. Provide leadership and service to the university community through continuing education.
3. Promote self-directed learning and critical thinking as desirable professional behavior.
4. Exploration of a variety of health, fitness, and wellness settings to allow students the opportunity to determine specific career goals

Curriculum Requirements

Students must complete the coursework requirements for the B.S. in Health Fitness Management, all College of Professional Studies General Education requirements, and the Alfred University requirements for Physical Education and Global Perspective Requirements, plus enough electives to reach at least 120 credit hours.

Business Foundations Courses

ACCT 211	Financial Accounting	3
MKTG 221	Marketing Principles	3
LAW 241	Legal Environment of Business	3
MGMT 328	Management & Organizational Behavior	3
ECON 420	Healthcare Economics & Reimbursement	3
Total Credit Hours Business Foundation		**15**

Athletic Training Foundations Courses

ATHT 105	Perspectives in Athletic Training	1
ATHT 110	Medical Sciences	2
ATHT 111	Emergency Medicine in Athletic Training	3
ATHT 190	Principles of Strength and Conditioning	2
ATHT 205	Structural Kinesiology	3
ATHT 215	Personal Health and Wellness	2
ATHT 222	Nutrition for Human Perf/Exercise	2
ATHT 242	Sports, Society, and Ethics	3
ATHT 392	Biomechanics	2
ATHT 393	Physiology of Exercise	4
ATHT 432	Organization & Admin of Athletics	2
ATHT 459	Research Methods I	2
Total credit hours ATHT Foundation		**28**

Health and Fitness Management Courses

HFMT 305	Field Experience	1
HFMT 405	Program Design & Implementation Lab	3
HFMT 420	Health Assessment Special Populations	3
HFMT 410	Exercise Prescription and Lab	3
HFMT 485	Health Fitness Management Internship	3
HFMT 490	Senior Seminar	1
HFMT 495	Health Promotion Program Design	2
Total Credit Hours HFMT Courses		**15**

General Education Courses

BIOL 150	Biological Foundations	4
BUSI 113	Business Statistics	3
COMM 101	Intro to Communications	4
ENGL 101	Writing I	4
ENGL 102	Writing II	4
Humanities		4
Total Credit Hours General Education		**23**

Liberal Arts Core

BIOL 119	Physiology of Aging	4
BIOL 207	Intro to Anatomy & Physiology I	4
BIOL 208	Intro to Anatomy & Physiology II	4

PSYC 101	Introduction to Psychology	4
PSYC 251	Principles of Learning & Behavior Mod	4
PSYC 322	Health Psychology	4
Additional Liberal Arts Electives (minimum)		2
Total Credit Hours Liberal Arts Core		**26**

Clinical Experiences

Health and fitness management students learn about practice settings and strong skills in working with clients in applied settings through a sequence of clinical experiences. Evaluation of student competencies in applied settings assures that students have integrated key skills and are ready for clinical practice. Students will be evaluated at clinical experience sites during HFMT 305: Field Experience and HFMT 485: Health Fitness Management Internship by their site supervisors. This evaluation will consist of quantitative and qualitative measures identifying a student's abilities, knowledge, and professional skills in each clinical setting. The scores of these evaluations will contribute to the grades for their respective classes, and will become part of their professional portfolio.

Additional Program Costs:

There are costs associated with being enrolled in the HFMT Program that are in addition to typical university costs such as tuition, room, board, and books. Typical fees associated with HFM may include but are not limited to: lab fees, personal liability insurance, immunization maintenance, apparel to adhere to dress code(s), student membership fees for the professional organizations (NSCA, ACSM, NASM, etc.), and travel to and from off-campus clinical assignments and internships.

Health and Human Performance Minors

Students from any curriculum area at Alfred University are permitted to enroll in the minors. These minors allow students to combine interests in a variety of study areas, while maintaining a focus on fitness and wellness.

Coaching Minor

If you're looking to become licensed as a coach for youth or adult community athletics clubs, or if your passion for coaching is at the educational level, The Alfred University Athletic Coaching minor is for you. The Coaching program takes an interdisciplinary approach, addressing topics ranging from CPR and other first aid, nutrition, and personal health, to coaching theory and sports philosophy

Required Courses:

COAC 291	Philosophy/Principles/Org Athletics	3
COAC 301	Health Sciences Applied to Coaching	3
COAC 475	Theories/Technique Coaching Sport	2
ATHT 111	Emergency Medicine in Ath Training	2
ATHT 190	Principles Strength Training/Record	2
ATHT 222	Nutrition for Health/Human Performance	2

Electives* (Take at least 5 credits):

ATHT 103	Prevention & Care of Ath Injuries	4
ATHT 215	Personal Health	2
ATHT 232	Introduction to Sports Management	3
ATHT 241	Sports, Society and Ethics	3
Total Credit Hours (minimum)		**19**

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

Exercise Science minor

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

Required Courses:

ATHT 103	Prevention and Care of Athletic Injuries	4
ATHT 103	Lab-Prevention/Care of Athletic Injuries	0
ATHT 111	Emergency Medicine in Athletic Training	3
ATHT 111	Lab-Emergency Med in Athletic Training	0
ATHT 190	Princ of Strength and Reconditioning	2
ATHT 205	Structural Kinesiology	3
ATHT 205	Lab-Structural Kinesiology	0
ATHT 215	Personal Health and Wellness	2
ATHT 222	Nutrition for Human Perf/Exercise	2
ATHT 393	Physiology of Exercise	3
BIOL 207	Intro to Anatomy and Physiology I	4
BIOL 208	Intro to Anatomy and Physiology II	4
Total Credit Hours		**27**

Sports Management Minor

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

Required Courses:

ATHT 232	Introduction to Sports Management	3
ATHT 242	Sports, Society, and Ethics	3
ATHT 432	Organization & Administration of Athletics	2
BUSI 485	Internship (in a sports-related business)	2-4
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
Total Credit Hours		**23-25**

Human Studies Division

Majors: History, Philosophy
Minors: History, Philosophy, Religious Studies

History

"Bunk," Henry Ford called history. "A pack of tricks we play on the dead," said the French writer Voltaire. And yet we all know that a society understands what it is and what it wants to be based on an understanding of what it has been. Our history shapes our identity.

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

The program addresses the needs of both the student who regards historical study as a vital component of a general liberal arts education and the student who plans to become a professional historian. Recent graduates have gone into law, business, teaching, government service, professional sports, and advertising. We open doors for our history majors.

Requirements for the major

From the numerous courses offered (see listing and course descriptions on p. 225) a total of 34 credit hours in history is required. Of these hours, 26 must be drawn from the 300 or 400 level, and the student must complete eight hours in American and 8 hours in non-American history at the 300 or 400 level.

Total credit hours 34

Upon completion of this program a student is able to:

1. Answer questions accurately and succinctly and with specific reference to reading and lecture material received
2. Think and write critically about historical issues, including historiography
3. Use primary and secondary sources in developing historical analyses

Requirements for the 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.

Total credit hours 20

Philosophy

The philosophy program gives students the opportunity to think deeply and systematically about fundamental issues having to do with knowledge, values, human nature, and culture. Some of these relate to foundational questions in various disciplines—for instance: Does the scientific view of the world mean that free will is an illusion? Could a computer be conscious? What makes a work of art meaningful? What is justice? Other questions arise in the course of everyday experience and concern the way we live—our ethics, our choices, our relationships, and our work.

Philosophy students will become acquainted with the history of ideas, with classical and contemporary philosophical debates, and with methods of philosophical analysis. A student who graduates with a major in philosophy will be knowledgeable about the history of Western thought, have some acquaintance with non-Western thinking, be skilled in the analysis of arguments and texts, and be able to understand contemporary issues in their broader historical, intellectual, and cultural contexts. Since philosophical questions often overlap with questions in other fields of learning, philosophy students are encouraged to take interdisciplinary work.

Philosophy majors can pursue careers in any field requiring well-developed analytical and communication skills, including government, business and service professions. Philosophy is also excellent preparation for further studies in graduate and professional schools. Our recent graduates are pursuing careers in medicine, law, philosophy, teaching, politics and policy, and performance art.

Requirements for the major
Students choose one of two tracks:

General Philosophy Track

Required Courses: 12 credits

PHIL 282	Introduction to Logic	4
Choose 8 credits from the following courses:		8
PHIL 311	Greek Philosophy	
PHIL 312	Modern Philosophy	
PHIL 313	19th Century Philosophy	
PHIL 314	20th Century Philosophy	

or topics courses with substantial history of philosophy content chosen with major advisor.

Elective Courses: 20 credits
(12 credits must be above 300-level)

PHIL	Philosophy Electives	
Total credit hours		**32**

Philosophy of Religions Track

Required Courses: 12 credits

PHIL 281	Ethics	
or PHIL 382	Philosophy of Religion	4
Choose 8 credits from the following courses:		8
PHIL 311	Greek Philosophy	
PHIL 312	Modern Philosophy	
PHIL 313	19th Century Philosophy	
PHIL 314	20th Century Philosophy	

or topics courses with substantial history of philosophy content chosen with major advisor.

Elective Courses: 24 credits

PHIL	Philosophy Electives	
	(4 cr. must be 300-400 level)	8
RLGS	Religious Studies Electives	
	(8 cr. must be 300-400 level)	16
Total credit hours		**36**

Upon completion of this program a student is able to:

1. Discuss links between philosophy and other cultural phenomena, e.g. natural science, the arts, politics, religion, etc.
2. Express ideas clearly, both orally and in writing.
3. Demonstrate competence in beginning formal logic to the level of first-order quantification (general track)
4. Read texts carefully, sensitively and critically
5. Demonstrate facility with the methodologies of interpretation in studying religions
6. Evaluate the nature and quality of arguments
7. Demonstrate knowledge of at least two periods or movements in the history of philosophy.
8. Demonstrate familiarity with several ongoing debates in contemporary philosophy.
9. Make meaningful comparisons between religious traditions (philosophy of religions track)
10. Demonstrate knowledge of world religions and wisdom-centered traditions. (philosophy of Religions track)

Requirements for the 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.

Religious Studies
The Religious Studies minor helps students to gain new intellectual perspectives on their own religions and those of other people. It encourages students to see what the world's great religions have in common and how they differ. Courses explore both Asian traditions (Hinduism, Buddhism, Jainism, Sikhism, Confucianism, Taoism, and Shinto) and Western monotheistic traditions (Judaism, Christianity, Islam).
We explore the many ways that human beings have asked and answered some of the Big Questions such as: What is the nature of Ultimate Reality? Why do we experience suffering and death? How should we live in this life? What is our ultimate purpose?

The study of religions is inherently interdisciplinary. We consider the great religious stories of each tradition as well as important teachings, texts, teachers, ethics, rituals, and other practices. We examine related material objects including art, architecture, music, food, clothing, and body modification. We explore the emotional dimensions of religious experience, the social functions of religion, historical developments, and debates within each tradition and between traditions.

Because religious beliefs, rituals and values bear upon all aspects of human life, the study of religion complements majors in many areas, such as literature, history, philosophy, the arts, education, and the social sciences.

The study of religion also contributes a great deal to careers in the humanities and social sciences, and also enhances career opportunities in such areas as education, journalism, communications, international affairs, business, social work, counseling, the health professions, and, of course, the religious professions.

Requirements for the minor in Religious Studies
The minor consists of 20 credit hours in Religious Studies coursework. Students may substitute up to four elective credit hours in Philosophy, History, Anthropology, English, Psychology, or Sociology courses related to Religious Studies in content or methodology. Substitutions must be approved by the advisor.

Mathematics and Computer Science Division

Majors: Mathematics (with option for B.S. or B.A. degree), Mathematics with Actuarial Science (B.S.)
Minors: Computer Science, Data Analytics, Mathematics

The mathematics and computer science program serves a variety of purposes:
- maintaining a vigorous and flexible program for mathematics and actuarial science majors
- providing the necessary mathematical foundations for engineering and science students
- offering an introduction to modern quantitative methods for students of management, economics, and the social sciences
- enhancing other disciplines through minors in computer science, data analytics, and mathematics

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

Requirements for the Bachelor of Arts major in Mathematics

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
plus 6 credit hours in math courses numbered above 240		
Total credit hours		**37**

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

MATH 351	Introduction to Operations Research	4
MATH 381	Mathematical Statistics	4

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

MATH 381	Mathematical Statistics	4
MATH 401	Advanced Engineering Mathematics	4

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

MATH 381	Mathematical Statistics	4
MATH 461	Geometry	4

Upon completion of this program a student is able to:
1. Understand and apply problem-solving techniques
2. Read, write, and analyze mathematical proofs
3. Communicate mathematics both orally and in writing
4. Understand concepts and applications from a broad range of mathematical areas

Requirements for the Bachelor of Science major in Mathematics

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

plus 11 credit hours in mathematics courses numbered above 300; plus 8 credit hours of natural and computer science courses different from those used to satisfy degree, major, and general education requirements
Total credit hours **58**

Upon completion of this program a student is able to:
1. Understand and apply problem-solving techniques
2. Read, write, and analyze mathematical proofs
3. Communicate mathematics both orally and in writing
4. Understand concepts and applications from a broad range of mathematical areas
5. Understand connections between mathematics and a broad range of scientific areas
6. Understand elementary computer science and its applications
7. Understand at least one mathematical or scientific area in greater depth

Requirements for the major in Mathematics with Actuarial Science

The B.S. degree in Mathematics with Actuarial Science prepares students to for the first two actuarial exams while also preparing them to enter a professional working environment.

In addition to passing the actuarial exams, the Society of Actuaries also requires actuaries the completion of approved coursework in three areas: economics, corporate finance, and applied statistical methods.

Those requirements are satisfied through the coursework in this major, the specific courses that satisfy the requirements are listed on the Society of Actuaries webpage.

Take these courses:

ACCT 211	Financial Accounting	3
ACCT 212	Managerial Accounting	3
CSCI 156	Computer Science I	4
ECON 201	Principles of Microeconomics	4
ECON 202	Principles of Macroeconomics	3
FIN 205	Student Managed Investment Fund	1
FIN 206	Student Managed Investment Fund Lab	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
Total credit hours		**65**

Upon completion of this program a student is able to:
1. Demonstrate preparation to enter the actuarial field
2. Demonstrate preparation for graduate study in mathematics or statistics
3. Demonstrate preparation for the first two actuarial exams
4. Demonstrate satisfaction of the VEE requirements

Requirements for the Mathematics minor

The minor in mathematics requires MATH 151, MATH 152, and MATH 253, plus an additional 10 credit hours of mathematics courses numbered 200 and above. At most two credits of independent study may be applied toward the mathematics minor. Courses should be selected in consultation with the mathematics minor advisor.
Total credit hours **22**

Requirements for the Computer Science minor

Students must take the following 16 credit hours:

CSCI 156	Computer Science I	4
CSCI 157	Computer Science II	4
CSCI 205	Database Systems	4
CSCI 206	Algorithm Design	4

plus 8 credit hours selected from the following in consultation with the minor advisor (other courses may be approved with Division permission):

ENVS 220	Introduction to GIS	4
ENVS 320	Advanced GIS Applications	4
MATH 231	Introduction to Data Science	4
MATH 281	Foundations of Higher Math	4
MATH 305	Theory of Computation	4
PHIL 282	Introduction to Logic	4
RNEW 303	Software Engineering	4
Total credit hours		**24**

Requirements for the Data Analytics minor

Students must take the following 16 credit hours:

CSCI 156	Computer Science I	4
CSCI 205	Database Systems	4
MATH 151	Calculus I	4
MATH 231	Introduction to Data Science	4

plus 6-8 credit hours selected from the following in consultation with the minor advisor and limited to at most one statistics course (other courses may be approved with Division permission):

BIOL 226	Biostatistics	4
BIOL 405	Bioinformatics	4
BUSI 113	Business Statistics	3
ENGR 305	Engineering Statistics	3
ENVS 205	Environmental Data Analysis	4
ENVS 220	Introduction to GIS	4
MATH 381	Mathematical Statistics	4
MKTG 452	Marketing Research	3
POLS/SOCI 230	Intro to Data Analysis and Statistics	4
PSYC 220	Psychological Methods and Statistics	4
Total credit hours		**22-24**

Modern Languages Division

Majors: Foreign Language and Culture Studies with Concentration in French, Spanish
Minors: French, Spanish

An increasing number of careers demand proficiency in a second language. More students are choosing to study modern languages for professional enhancement every year. Others select foreign language study to broaden their intellectual horizons, to enjoy the literature of other countries and times, or to be able to travel with greater

independence. Students in the College of Liberal Arts and Sciences are required to successfully complete the second semester of the first year of a foreign language or pass the placement exam. Students who plan to seek certification as foreign language teachers should consult the chair of the Education Division.

The Modern Languages Division offers majors in Foreign Language and Culture Studies (concentration in French) and in Spanish as well as minors in French and Spanish.

Foreign Language and Culture Studies with a Concentration in French

Foreign Language and Culture Studies with a concentration in French is an interdisciplinary major that requires 16 credits of upper-level French courses, a minimum of 8 credits in a second foreign language, and selection of courses in related fields such as French and Francophone history, art history, global studies or linguistics.

Requirements for the major

Students must take at least 20 credits taught in French. At least 20 credits for the major must be taken on the Alfred University campus.

Core course		
FREN 302	Advanced French Grammar and Comp I	4
FREN 490	Modern Languages Senior Seminar	0
Major level French courses		
(FREN 202 or above or prior-approval by advisor)		16
Second Foreign Language		
(Minimum of 8 credits)		8
Elective courses in related fields		12
Total Credit Hours		**40**

Note: All courses taken abroad or in affiliated fields (e.g. history, art history, or linguistics) must be pre-approved by the major advisor. Additional courses in French or another foreign language may count as electives. Only 4 credits at the 100-level allowed.

Students majoring in Foreign Language and Culture Studies are encouraged to pursue some independent study and to spend at least a semester in a French language Study Abroad program.

Spanish

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

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

Requirements for the major in Spanish

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

Required Courses		
SPAN 301	Advanced Conversation & Composition	4
SPAN 311	Peninsular Culture and Literature I	4
SPAN 312	Peninsular Culture and Literature II	4
SPAN 315	Latin American Culture and Literature I	4
SPAN 316	Latin American Culture and Literature II	4
SPAN 360	Literary Theory Seminar	4
SPAN 490	Modern Languages Senior Seminar	0

Elective Courses (choose 12 credit hours):

SPAN 400	Topics in Hispanic Literature	4
SPAN 402	Readings in Modern Latin American Lit	4
SPAN 404	Latinos/as in the United States	4
SPAN 450	Independent Study	1-4
Total credit hours		**36**

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

Upon completion of the Foreign Language and Culture Studies or Spanish programs a student is able to:

1. Demonstrate knowledge and understanding of target cultures
2. Demonstrate ability to critically analyze the style, context and content of selected text.
3. Demonstrate ability to find significant and appropriate scholarly resources, to cite and evaluate sources, and to describe the significance of research content.
4. Demonstrate ability to write comprehensibly with grammatical accuracy, a range of vocabulary and content. Show little evidence of English interference in target language.
5. Demonstrate aural comprehension and an ability to speak comprehensibly with overall grammatical accuracy, clarity, a range of vocabulary and content, and accurate pronunciation. Show little evidence of English interference in target language.

Requirements for the minor in French

(Prerequisites: FREN 101, 102, 201, 202 or equivalent)
Students wishing to minor in French take one required course:

FREN 302	Advanced French Grammar and Composition I	4
They then select a minimum of 16 credit hours of 300-400 level French		16
Total credit hours		**20**

Requirements for the minor in Spanish

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

SPAN 301	Advanced Conversation and Composition	4
SPAN 311	Peninsular Culture and Literature I	4
or SPAN 312	Peninsular Culture and Literature II	
SPAN 315	Latin American Culture and Literature I	4
or SPAN 316	Latin American Culture and Literature II	
SPAN 360	Literary Theory Seminar	4
Choose 4 credit hours from:		4
LING 120	Introduction to Linguistics	
SPAN 202	Spanish IV	
Or any of the Elective Courses listed above (SPAN 400, 402, 404, or 450)		
Total credit hours		**20**

Physics and Astronomy Division

Majors: Physics, General Science
Minors: Astronomy, Physics, Planetary Science

Physics

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

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

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

Concentrations are as follows:

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

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

Solid State Physics – A concentration taking advantage of the materials-related offerings of the Inamori School of Engineering in the NYS College of Ceramics. Students interested in earning two degrees: a BA in Physics and a BS in Materials Science and Engineering will find this option most attractive. (See special requirements for "Double Degrees on p. 23.)

Mechanical Systems – This concentration includes the offerings in fluid mechanics, thermodynamics, heat transfer, and vibrating systems of AU's Mechanical Engineering program. It is particularly appropriate for students seeking two degrees: a BA in physics and a BS in Mechanical Engineering. (See special requirements for "Double Degrees on p. 23.)

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

Core Requirements for the major

First and Second Years:

PHYS 125	Physics I	4
PHYS 126	Physics II	4
PHYS 325	Elementary Optics	3
PHYS 326	Elementary Modern Physics	3

Third and Fourth years:

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

***seniors in good standing may, with permission of instructor, may take a 500-level graduate course**

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

General Physics concentration – 8 credits from among:
Any of the courses outlined in the other concentrations, with no more than four credits from any one concentration.

Theoretical Physics concentration – 8 credits from among:

PHYS 402	Quantum Mechanics II*	4
PHYS 454	Electricity and Magnetism II*	4
PHYS 410	Particle Physics	4
PHYS 405	General Relativity	4
PHYS 4XX	Chaos and Continua*	4

***seniors in good standing may, with permission of instructor, take a 500-level graduate course**

Astrophysics concentration – 8 credits from among:

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

Solid State Physics concentration – 8 credits from among:

CEMS 344	Properties II: Electrical/Magnetic/Optical	4
CEMS 347	Spectroscopy	2
CEMS 349	X-ray Characterization	2
CEMS 501	Solid State Physics*	3
PHYS 408	Physics of Glass*	4

***seniors in good standing may, with permission of instructor, take a 500-level graduate course**

Mechanical Systems concentration – 8 credits from among:

MECH 321	Thermodynamics II	3
MECH 324	Fluid Mechanics I	3
MECH 415	Mechanical Vibrations I	3
MECH 424	Fluid Mechanics II	3
Total credit hours		**40**

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.

General Science Major

The General Science major is offered jointly by the Divisions of Biology, Chemistry and Physics/Astronomy. See p. 24 for the summary of major requirements

Requirements for the minor in Physics

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

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

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.

Astronomy Minor

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

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

Planetary Science Minor

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

ASTR 302*	Planetary Science	2

Select 12 credit hours from the following

ASTR 103	Introductory Astronomy	4
ASTR 107	Elementary Astronomy Lab	2
ASTR 307	Observational Astronomy	2
GEOL 101	This Dynamic Earth	4
GEOL 110	Lunar Geology	2
GEOL 201	Surficial Geology	4
GEOL 210	The Geology of Venus	2
GEOL 408	Tectonics	4
Total Credit Hours		**14**

Psychology Division

Majors: Psychology, Gerontology
Minors: Biopsychology, Gerontology, Psychology

The Psychology Program exposes students to the current theories and research in the field, emphasizing the importance of the scientific approach to the study of human behavior and mental states. The curriculum fosters communication skills and critical, scientific thinking about psychological issues. Students in the Psychology program have the opportunity to gain applied experience through supervised counseling skills training, directed research, independent study, and internships. Students in the program will be prepared for graduate education or entry into occupations which utilize knowledge of human behavior, such as counseling, education, law, medicine, and business.

Students who decide to major in Psychology will have comprehensive exposure to the discipline as well as the concentration to gain additional knowledge and skills related to specific areas of psychology. There are five program options for Psychology majors:

The *General Psychology Concentration* encourages breadth of study and allows flexibility in course selection that provides a general knowledge of human behavior and psychological functioning that is useful in many types of careers.

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

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

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

The *Industrial/Organizational Concentration* is for students interested in careers where psychology and business intersect. Such fields include advertising, marketing, human resource management, and human factors engineering. The program prepares students for graduate study or careers in business and industry.

Requirements for the major

Foundational Core (all Concentrations) (14 credit hours)

PSYC 101	Introduction to Psychology	4
PSYC 220	Psychological Methods and Statistics	4
PSYC 230	Psychological Research and Design I	2
PSYC 310	Professional Preparation	2
PSYC 497	Senior Seminar	2

General Psychology Concentration

Foundational Core		**14**
A. Biological (4 credit hours)		
PSYC 330	Neuropsychology	4
B. Learning and Cognitive Processes (4 credit hours)		
PSYC 251	Principles of Learning & Behavior Mod	4
PSYC 311	Sensation and Perception	4
PSYC 332	Cognitive Processes	4

C. Developmental (4 credit hours)

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

D. Social and Personality (4 credit hours)

PSYC 282	Social Psychology	4
PSYC 341	Theories of Personality	4
PSYC 372	Psychology of Gender	4

E. Mental and Physical Health (choose one)

PSYC 210	Communication and Counseling Skills	2
PSYC 322	Health Psychology	2-4
PSYC 342	Psychopathology	4
PSYC 471	Child Psychopathology	3
PSYC 472	Child Interventions	3

Select additional electives from the content groups

Total credit hours required (minimum) 40

Clinical/Counseling Psychology Concentration

Foundational Core 14

A. Biological (4 credit hours)

PSYC 330	Neuropsychology	4

B. Learning and Cognitive Processes (4 credit hours)

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

C. Developmental (4 credit hours)

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

D. Social and Personality (4 credit hours)

PSYC 341	Theories of Personality	4
PSYC 372	Psychology of Gender	4

E. Mental and Physical Health (take all; 6 hours)

PSYC 210	Communication and Counseling Skills	2
PSYC 342	Psychopathology	4

Concentration specific: (take all; 8 hours)

PSYC 491	Clinical Procedures	4
PSYC 492	Clinical Practicum	4

Total credit hours required (minimum) 44

Experimental Psychology Concentration

Foundational Core 14

A. Biological (4 credit hours)

PSYC 330	Neuropsychology	4

B. Learning and Cognitive Processes (8 credit hours)

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

C. Developmental (4 credit hours)

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

D. Social and Personality (4 credit hours)

PSYC 341	Theories of Personality	4
PSYC 372	Psychology of Gender	4

E. Mental and Physical Health (choose one)

PSYC 210	Communication and Counseling Skills	2
PSYC 322	Health Psychology	2-4
PSYC 342	Psychopathology	4
PSYC 471	Child Psychopathology	3
PSYC 472	Child Interventions	3

Concentration specific: (8 hours)

PSYC 411	Research and Design II	4
PSYC 412	Research Practicum	4

Total credit hours required (minimum) 44

Child Psychology Concentration

Foundational Core 14

A. Biological (4 credit hours)

PSYC 330	Neuropsychology	4

B. Learning and Cognitive Processes (4 credit hours)

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

C. Developmental (8 credit hours)

PSYC 261	Cognitive Development	4
PSYC 262	Social Development	4

D. Social and Personality (4 credit hours)

PSYC 282	Social Psychology	4
PSYC 341	Theories of Personality	4
PSYC 372	Psychology of Gender	4

E. Mental and Physical Health (choose one)

PSYC 210	Communication and Counseling Skills	2
PSYC 322	Health Psychology	2-4
PSYC 342	Psychopathology	4

Concentration specific: Complete one course from each of the following three groups (9 credit hours)

Group 1

PSYC 320	Parenting Seminar	2-3

Group 2

PSYC 471	Child Psychopathology	3
PSYC 472	Child Interventions	3

Group 3

PSYC 485	Practicum	2-4
PSYC 492	Clinical Practicum (at appropriate site)	4

Total credit hours required (minimum) 45

Industrial/Organizational Psychology Concentration

Foundational Core 14

A. Biological (4 credit hours)

PSYC 330	Neuropsychology	4

B. Learning and Cognitive Processes (4 credit hours)

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

C. Developmental (4 credit hours)

PSYC 118	Intro to Adult Development and Aging	4

D. Social and Personality (4 credit hours)

PSYC 282	Social Psychology	4

E. Mental and Physical Health (choose one)

PSYC 210	Communication and Counseling Skills	2
PSYC 322	Health Psychology	2-4
PSYC 342	Psychopathology	4

Concentration Specific:

take both

PSYC 302	Psychological Measurement	4
PSYC 362	Industrial/Organizational Psychology	3

and complete 9 credit hours from the following:

ACCT 211	Financial Accounting*	3
ACCT 212	Managerial Accounting*	3
ECON 201	Principles of Microeconomics*	4
ECON 202	Principles of Macroeconomics*	3
ECON 420	Healthcare Economics	3

FIN 348	Managerial Finance*	3
MGMT 305	Gender and Organizations	3
MGMT 318	Gender Equity in Business	3
MGMT 328	Management & Organizational Behavior*	3
MGMT 472	Human Resource Management	3
MGMT 484	Operations Management*	3
MKTG 221	Marketing Principles and Management*	3
MKTG 452	Market Research	3
MKTG 479	Consumer Behavior	3
MKTG 482	Sales Management	3
Total credit hours required (minimum)		**48**

NOTE: Take all of the courses marked with an asterisk (*) to earn a minor in Business Administration and be eligible for the 4+1 Psychology + MBA program

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

Requirements for the minor in Psychology

Foundational Core (take all; 8 credit hours)		
PSYC 101	Introduction to Psychology	4
PSYC 220	Psychological Methods and Statistics	4
AB. Biological, Learning & Cognitive Processes (4 credits)		
PSYC 251	Principles of Learning & Behavior Mod	4
PSYC 311	Sensation and Perception	4
PSYC 330	Neuropsychology	4
PSYC 332	Cognitive Processes	4
C. Developmental (4 credit hours)		
PSYC 118	Intro to Adult Development and Aging	4
PSYC 261	Cognitive Development	4
PSYC 262	Social Development	4
D. Social and Personality (4 credit hours)		
PSYC 282	Social Psychology	4
PSYC 341	Theories of Personality	4
PSYC 372	Psychology of Gender	4
E. Mental and Physical Health (choose one)		
PSYC 210	Communication and Counseling Skills	2
PSYC 322	Health Psychology	2-4
PSYC 342	Psychopathology	4
PSYC 471	Child Psychopathology	3
PSYC 472	Child Interventions	3
Electives		
additional courses from A-E above may count as electives		
Total credit hours required (minimum)		**24**

- **NOTE: Eight hours must be at the 300 or 400 level**

Biopsychology

You'll understand the science behind human behavior and how the body and mind work together. The best of our psychology and biology courses are combined to provide you with a well-rounded program to assist you as you pursue graduate school or a career in a science-related profession.

Requirements for the Biopsychology minor

D. Biology Core		
BIOL 211	Cell Biology	4
Complete one of the following:		
BIOL 207	Introduction to Anatomy & Physiology I	4
BIOL 307	Anatomy & Physiology: Nerves/Skeleton	4
Complete one of the following:		
BIOL 130	Introduction to Human Genetics	4
BIOL 212	Principles of Genetics	4
E. Psychology Core		
Take all 3 of the following:		
PSYC 311	Sensation and Perception	4
PSYC 322	Health Psychology	4
PSYC 330	Neuropsychology	4
F. Advanced Application		
Take 4 credit hours from the following:		
BIPY 485	Practicum or Internship	1-4
BIPY 499	Thesis	1-4
Total credit hours		**28**

Gerontology

Our nation is “graying” at a dramatic rate. In 2014, seniors aged 65+ comprised about 14.5% of the U.S. population, estimated to be around 46.2 million people. By 2050, this number will jump to about 21% or 87 million individuals, so that 1 out of every 5 Americans will be 65 years old or older!

As these generations retire, there will be an increased demand for professionals in a wide variety of fields who understand issues related to the aging process. Service for the aging is already one of the fastest growing job markets.

Gerontology is the study of aging, including the biological, psychological, and sociological aspects of the aging process. It includes the study of changes in adults as they age, the ways that society changes with an aging population, and the ways we apply this information to programs and policies for older adults.

The Gerontology major at AU will help provide you with the skills and background needed in today’s job market. In our program, you will study aging from the psychological, sociological, biological, and political perspectives, and learn about current “hot” topics facing our country, such as Social Security, retirement, community programs and the impact of an aging population on our medical and legal systems. Our multiple community connections will provide you with opportunities to gain hands-on experience through supervised internships.

Requirements for the Gerontology major

Complete all of the following:

GERO 118	Intro 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 (prerequisites)	4
SOCI 348	Sociology of Families	4

Select one course from each of the following three groups:

Group I		
PSYC 220	Psychological Methods and Statistics	4
SOCI 230	Intro to Data Analysis and Statistics	4
Group II		
SOCI 253	Social Welfare Institutions	4
POLS 355	Public Policy	4
PSYC 322	Health Psychology	2-4
Group III		
GERO 300	Special Topics in Gerontology	2-4
GERO 450	Independent Study	2-4
GERO 497	Senior Seminar in Gerontology	2
SOCI 470	Field Work	2-4
Total credit hours		**34**

Upon completion of this program a student is 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.

Requirements for the minor in Gerontology

Complete all of the following:

GERO 118	Intro to Adult Development and Aging	4
GERO 429	Cognition and Aging	2
GERO 485	Gerontology Internship (prerequisites)	4

Complete one course from each of the following four groups:

BIOL 119	Physiology of Aging	4
PSYC 322	Health Psychology	2-4
PSYC 210	Communication and Counseling Skills	2
PSYC 371	The Psychology of Death and Dying	4
GERO 300	Special Topics in Gerontology	2-4
GERO 497	Senior Seminar in Gerontology	2
SOCI 253	Social Welfare Institutions	4
SOCI 348	Sociology of Families	4
POLS 355	Public Policy	4
PSYC 450	Independent Study	2-4
Total credit hours		**20**

Social Sciences Division

Majors: Criminal Justice Studies, Political Science, Sociology
Minors: Biological Anthropology, Cultural Anthropology, Criminal Justice Studies, Political Science, Public Law, Science Policy, Sociology

Anthropology

The Anthropology minors in Biological Anthropology and Cultural Anthropology attract students who want to explore cultural diversity across the globe and through time. These minors are designed to complement student course work in related disciplines or in interdisciplinary programs. Anthropology courses emphasize the application of the anthropological perspective in understanding present-day social issues.

The minor in Biological Anthropology anchors humans in the natural world by emphasizing our evolutionary and genetic past as well as our relationships with other primates. Courses on human health, animal behavior, and comparative anatomy, as well as ecological and environmental perspectives on humans in Belize and southern Africa are among the varied dimensions of this broad minor.

Requirements for the Biological Anthropology minor

I. Core Courses (8 credit hours)		
ANTH 120	Human Origins	4
BIOL 130	Introduction to Human Genetics	4
II. Electives (12 credit hours)		
ANTH 303	Health & Culture*	4
BIOL 315	Genetics and Evolution of Populations*	4
BIOL 348	Animal Behavior*	4
BIOL 375	Comparative Vertebrate Biology*	4
PSYC 330	Neuropsychology	4
PSYC 351	Human Sexuality	4
SOCI 235	Socialization*	4
Total credit hours		**20**

***these courses have prerequisites; see course descriptions**

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 physical) or allows students to focus more on cultural and linguistic anthropology, and related topics in two additional elective courses. The anthropological view on cultures, both large and small, modern and traditional, emphasizes comparative, holistic, historical, and multidisciplinary frames of analysis. Advanced study of a language and study abroad are always encouraged to add depth to these minors.

Requirements for the Cultural Anthropology minor

I. Core Courses (8 credit hours)		
ANTH 110	Cultural Anthropology	4
ANTH 120	Human Origins	4
or ANTH 304	Language and Culture*	
II. Electives (8 credit hours)		
ANTH 200/300	Special Topics	1-4
ANTH 302	The Nacirema	4
ANTH 303	Health and Culture*	4
ANTH 311	Nip, Tuck, Perm, Pierce, Tattoo, Embalm	2
ANTH 312	Violence and Culture*	4
ANTH 321	Online Online: Weblife and Its Effects	4
ANTH 400	Special Problems in Anthropology*	1-4
ANTH 450	Independent Study	1-4
ANTH 470	Field Work*	2-4
ANTH 495	Global Issues Seminar*	4

ARTH 200/300/400	Special Topics	1-4
ARTH 304	Global Arts: Contemporary Asia	4
ARTH 305	Arts of India	4
RLGS 200/300	Special Topics	1-4
RLGS 307	Myth, Ritual, and the Creative Process	4
Total credit hours		**16**

***these courses have prerequisites; see course descriptions**

Criminal Justice Studies

The interdisciplinary Criminal Justice Studies major attracts students who want to study the criminal justice system and key criminal justice actors, processes, and institutions. Courses in the major examine such topics as criminal behavior, social and governmental efforts at control, and practices developed to rehabilitate offenders. In general, students learn the application of social science findings in an effort to evaluate and analyze contemporary criminal justice issues. Courses in the major draw on a number of different disciplines in the social sciences, including Sociology and Political Science. The major also provides for practical experience through coursework that encourages students to apply classroom knowledge to actual situations in the field.

Requirements for Criminal Justice Studies major

I. Core courses (24 credit hours)

CRIM 340	Concepts of Penology*	4
CRIM 351	Seminar in Criminal Behavior*	4
POLS 232	Judicial Processes	4
POLS 417	American Civil Liberties	2
SOCI 245	Crime and Society	4
SOCI 344	Sociology of Deviance	4

II. Electives (20 credit hours)

ANTH 312	Violence and Culture*	4
CRIM 322	Juvenile Justice*	2
CRIM 332	Focusing on Police*	2
CRIM 400	Special Topics in Criminal Justice	2-4
CRIM 450	Independent Study	1-4
CRIM 470	Field Work in Criminal Justice	4
ENVS 220	Introduction GIS	4
PHIL 281	Ethics	4
POLS/SOCI 230	Intro to Data Analysis and Statistics	4
POLS 242	Approaches to Law	4
POLS 313	State and Local Politics	4
POLS 316	American Constitutional Law & Politics*	4
POLS 355	Public Policy	4
POLS 373	Terrorism and International Security	4
PSYC 282	Social Psychology*	4
SOCI 235	Socialization*	4
SOCI 242	Social Problems*	4
SOCI 253	Social Welfare Institutions	4
SOCI 343	Race and Ethnicity	4
SOCI 431	Research Design and Strategies*	4
SPAN 301	Advanced Conversation and Composition	4

III. Institutes

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

Total credit hours 44

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

***these courses have prerequisites; see course descriptions**

Upon completion of this program a student is able to:

1. Articulate key concepts and approaches in criminal justice studies.
2. Identify key criminal justice actors, processes, and institutions at the local, state, and federal levels within the United States.
3. Describe the historical framework upon which current American criminal justice practices are built.
4. Explain the nature and causes of crime.
5. Evaluate and analyze contemporary criminal justice issues and their implications for society.
6. Critically think about complex issues and communicate them effectively in both oral and written form

Requirements for Criminal Justice Studies minor

I. Core Courses (22 credit hours)

CRIM 340	Concepts in Penology*	4
POLS 110	American Politics	4
POLS 232	Judicial Process	4
SOCI 110	Introduction to Sociology	4
SOCI 245	Crime and Society	4
SOCI 344	Sociology of Deviance	4
Total credit hours		**24**

***these courses have prerequisites; see course descriptions**

Political Science

The Political Science major attracts students who want to achieve a better understanding of the political environments that shape human interaction. Majors are introduced to the dynamics of politics both domestically and globally. Along with an understanding of political processes, they acquire a theoretical background for the study of political dynamics and the basic quantitative and qualitative tools for analyzing them. In addition to helping students prepare for graduate study, the major helps to prepare students for the world of work in government service, legal study, business, journalism, or teaching.

Requirements for Political Science Major

I. Core Courses

POLS 110	American Politics	4
POLS 230	Intro to Data Analysis and Statistics	4
POLS 271	World Politics	4

II. Elective Courses

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

American Politics:

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

Political Thought:

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

Comparative and International Politics:

POLS 253	Dictatorship and Democracy	4
POLS 351	European Politics	4
POLS 382	Latin American Politics	4

Twelve additional credit hours in Political Science

Total credit hours 36

***these courses have prerequisites; see course descriptions**

Political Science Major – Education Track

Students seeking to major in Political Science in preparation for a career in middle/adolescent education (grades 7-12) can combine a Political Science Education Track academic major with a minor in Education. The requirements for a Political Science Education Track major are listed below.

Requirements for Political Science Major—Education Track

I. Core Courses

POLS 110	American Politics	4
POLS 230	Intro to Data Analysis and Statistics	4
POLS 271	World Politics	4

II. Elective Courses

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

American Politics:

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

Political Thought:

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

Eight additional credit hours in Political Science

III. Two courses in related social sciences and geography

ECON 201	Principles of Microeconomics	4
GEOL 101	This Dynamic Earth	4

IV. Four Courses in History

HIST 110	The Making of Europe	4
HIST 111	Modern Western History	4
HIST 211	American History I	4
HIST 212	American History II	4
Total credit hours		**52**

***these courses have prerequisites; see course descriptions**

Upon completion of this program a student is able to:

1. Demonstrate an understanding of the major concepts and methods used in the study of the politics of the United States.
2. Demonstrate an understanding of the major concepts and methods used in the study of international and comparative politics.
3. Demonstrate an understanding of the major concepts and methods used in the study of political theory.
4. Demonstrate the ability to see the relationships between their own situation and their political, cultural, and social environment.
5. Demonstrate effective oral and written communication skills, including the capacity to form an argument and defend it with evidence.
6. Evaluate the nature and quality of their own arguments/evidence and the arguments/evidence of others

Requirements for the minor in Political Science

POLS 110	American Politics	4
POLS 120	Great Issues in Politics	
or POLS 271	World Politics	4
Plus twelve additional hours in Political Science		
Total credit hours		**20**

Requirements for the minor in Public Law

POLS 110	American Politics	4
POLS 232	Judicial Processes	4
POLS 316	American Constitutional Law & Politics*	4
plus one course from the following:		
POLS 242	Approaches to Law	4
POLS 313	State and Local Politics	4
SOCI 245	Crime and Society*	4
Total credit hours		**16**

***these courses have prerequisites; see course descriptions**

Requirements for the minor in Science Policy

The minor in Science Policy provides a policy component for students majoring in engineering or science. This is especially important today given the role government plays in terms of both supporting and regulating business. Science policy minors must be majors in either an engineering field or in chemistry, biology, physics, or environmental studies.

Required courses for Science Policy minor:

POLS 110	American Politics	4
POLS 355	Public Policy	4
POLS 411	Bureaucracy	4
	Experiential Capstone Project*	2-4
Total Credit Hours		**14-16**

***To be determined under advisement**

Sociology

The Sociology major attracts students who want to better understand themselves, others, and the social, cultural, political, and economic environments within which social interaction occurs. The sociological method makes possible the systematic comparison of data from various types of groups, societies, cultures, and social institutions. Sociology majors take coursework in both theory and methods, allowing them to formulate generalizations about the nature and causes of human social behavior. Majors also participate, when feasible, in experiential learning opportunities.

In addition to helping students prepare for graduate study, the major helps prepare students for careers in such areas as social work, law, public health, business, and social research.

Requirements for Sociology major

I. Core Courses (16 credit hours)

SOCI 110	Introduction to Sociology	4
or ANTH 110	Cultural Anthropology	
SOCI 230	Intro to Data Analysis and Statistics	4
SOCI 420	Social Theory: A Survey*	4
SOCI 431	Research Design and Strategies*	4

II. Elective Courses (20 credit hours)

SOCI 200	Special Topics	1-4
SOCI/POLS/ENVS 214	Environment, Politics & Society	4
SOCI 235	Socialization*	4
SOCI 236	Cults, Sects, and the Main Line*	4
SOCI 242	Social Problems*	4
SOCI 245	Crime and Society*	4
SOCI/WGST 253	Social Welfare Institutions	4
SOCI 343	Race and Ethnicity	4
SOCI 344	Sociology of Deviance*	4
SOCI/WGST 346	Sociology of Sex and Gender*	4
SOCI/WGST 348	Sociology of Families*	4
SOCI 400	Special Topics*	1-4
SOCI 450	Independent Study	1-4
SOCI 470	Application of Sociology Field Work*	2-4
SOCI/GLBS 495	Global Issues Seminar*	4
ANTH 302	The Nacirema	4
ANTH 303	Health and Culture*	4
ANTH 304	Language and Culture*	4
ANTH 312	Violence and Culture*	4
ANTH 321	Online Online: Weblife and Its Effects	4
Total credit hours		**36**

***these courses have prerequisites; see course descriptions**

Upon completion of this program a student is able to:

1. Demonstrate an understanding of the sociological imagination and other major concepts defining the sociological approach to society.
2. Demonstrate an understanding of both qualitative and quantitative research methods.

3. Demonstrate the ability to see the relationships between their own situation and the political, cultural, and social environment within American society and cross-culturally.
4. Establish effective oral and written communication skills, including the capacity to form an argument and defend it with evidence.
5. Evaluate the nature and quality of their own arguments/evidence and the arguments/evidence of scholars, peers, and public media.

Requirements for the minor in Sociology

SOCI 110	Introduction to Sociology	4
SOCI 420	Social Theory: A Survey*	4
SOCI 431	Research Design and Strategies*	4
Eight additional credit hours		
Total credit hours		**20**

***these courses have prerequisites; see course descriptions**

Women's and Gender Studies Program

Minor: Women's and Gender Studies

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

The minor provides a theoretical and practical structure within which to study issues and scholarship relating to women and gender; promotes an understanding of the historical and biosocial contexts that shape our awareness of gender; and encourages independent reading about and the study of women's and gender issues around the world. It also encourages an exploration of the many positions possible within as well as outside the body of work considered women's and gender studies.

Faculty from throughout the university and across disciplines participate in the program, exposing students to a variety of conceptual frameworks, experiences, personal styles, ideas, and issues. Students complete an independent study project in their senior year, which serves as a capstone experience.

Requirements for the minor

Required Courses

WGST 101	Women in Society	4
WGST 450	Independent Study	2

Elective Courses
(others may be approved through advisement)
Choose 12 or more credits from at least two groups (I, II, III, IV).

I: Humanities

WGST 204	The Art of the Personal Essay	2
WGST 215	Framing Gender: Latin American Film	4
WGST 216	Cuba Close Up:Film since the Revolution	4
WGST 254	Women Writers	2 or 4
WGST 256	Multicultural American Literature	4
WGST 324	Queer American History	4
WGST 408	Women Writers in the Middle Ages	4
WGST 412	Gender and American Film	4
WGST 465	Gender, Race, Class and Media	4
WGST 481	International Women Writers	4

II: Social Sciences

WGST 246	Sex and the Body Politic	4
WGST 253	Social Welfare Institutions	4
WGST 305	Gender and Organizations	3
WGST 318	Gender Equity in Business	3
WGST 320	Parenting Seminar	2
WGST 346	Sociology of Sex and Gender	4
WGST 348	Sociology of Families	4
WGST 351	Human Sexuality	4
WGST 372	Psychology of Gender	4

III: Fine and Performing Arts

WGST 211	Women in Theatre, Society & Politics	4
WGST 382	Women/Art/History	4

IV: Women's and Gender Studies

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

Special Topics courses in Women's and Gender Studies (WGST 200, 300, 400) also count as electives toward the minor. Recent topics include US Women's History, Toni Morrison, and Women in Music.

The School of Art and Design

The New York State College of Ceramics

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

The Bachelor of Fine Arts (BFA)
The Bachelor of Science in Art History and Theory (BS)
The Master of Fine Arts (MFA) in four Areas:

- Ceramic Art
- Electronic Integrated Art
- Painting
- Sculpture/Dimensional Studies

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

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

Foundations
Foundations is a first year course predicated on generating a rigorous studio practice through comprehensive teaching philosophy that engages a broad range of questions, extending across and beyond artistic disciplines. Individual students bring their own experiences and skills into a community of peers.

During the course of this year, Foundations emphasizes posing questions, creative problem solving, and the synthesis of expanding individual creative solutions in order to make connections between a range of media and ideas. Emphasizing experimentation, group projects and individual aspiration, the Foundations program is a portal to a creative education.

During the fall semester students work with faculty teams from a variety of disciplines and perspectives to tackle vital topics in the education of an artist from form and color to building and drawing to performance and kinetics. The spring semester begins to sharpen conceptual and technical skills through smaller workshops. Throughout the year, all Foundations students meet collectively once a week on Wednesday mornings for films, discussions, group projects, performances, and Visiting Artists' talks.

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

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

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

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

Junior Year
Students entering the junior year have the latitude and ability to define their interests and creative goals. Students naturally become more focused, integrating conceptual and technical skills while developing a personal vision in their art making. At the junior level, academic and elective course work fosters interest in cross-disciplinary practice and undergraduate research possibilities.

The junior year is also the time for students to take advantage of study abroad opportunities. The School of Art & Design has several exchange programs including agreements with the University for the Creative Arts at Farnham, England, Edinburgh College of Art in Scotland, Fachhochschule Koblenz University of Applied Sciences in Germany, the Central Academy of Fine Art in Beijing, China, and the University of Sydney and the University of New South Wales in Australia. The Drawing, Painting and Photography Division offers a summer program through the Santa Reparata International School of Art in Florence, Italy.

Senior Year
Seniors work semi-independently in their own studio spaces, and are required to meet weekly with two faculty advisors (instructors) to discuss their work, research and process. Additionally, seniors participate in seminars, visiting artists programs, group critiques, discussions and exhibitions. Defining their own direction, seniors develop and produce a consistent body of work, which draws on their individual experiences, acquired skills and personal vision. The culmination of the BFA degree is the senior thesis exhibition. During the final two weeks of the academic year, the School of Art and Design is transformed into quality exhibition space where graduating seniors display their thesis work. The opening celebration of Senior Shows includes families and numerous guests from throughout Western New York State. Following the openings, students come back into their exhibition spaces for final reviews and faculty critiques. The momentum gained during the senior year prepares graduates

to enter the workforce as highly motivated artists and designers, and as accomplished technicians.

BFA Degree Requirements

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

Studio 72	
Academic Requirement *	25
Art History	17
Electives	14
Senior Project	0
Total degree credit hours	**128**

Students must also complete:

The University Global Perspective requirement (see p. 2)
The University Lifetime Health & Wellness requirement (see p. 2)

The University Global Perspective required credits could be taken within the required academic and/or Art History requirements. If a student completes the activity portion of the University Lifetime Health & Wellness requirement by taking one PFIT course (1 credit), the total number of credits to graduate to 131; if a student completes the activity portion with one EQUS 100-level course (2 credits), the total number of credits to graduate is 132.

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

***Academic Requirement (25 credit hours)**

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

Writing Requirement (4 credit hours)

Each student must successfully complete one semester of college writing (ENGL101 or ENGL 102). Students will be placed in the appropriate level course depending upon their scores on college entrance exams. (See p.16 for placement scores.)

Humanities Requirement (8 credit hours)

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

Humanities (area B or D)

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

Liberal Arts (may include area A, Literature.)

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

Academic Electives (13 or more credit hours)

Courses from the following areas count toward this requirement:

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

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

Typical Program

First Year

ART 101	Foundations I **	8
ART 102	Foundations II**	8
ARTH 100-level	Art History (three 2-credit classes)	6
ENGL 101 or 102	Writing I or II	4
Humanities	100 or 200 level	4

Sophomore Year

ART 200-level	Sophomore Studios**	16
ART 282-284	Required Drawing (sophomore or junior year)	4
ARTH 211	Issues and Debates in Contemp Art	3
Academic, Art History, or Elective		8-13

Junior Year

ART 300-level	Junior Studios**	16
Art History, Academic, or Elective		16
Physical Education Activity Course		2

Senior Year

ART 401	Senior Studio**	16-24
ART 499	Senior Show	0
Art History, Academic, or Elective		10
Physical Education Activity Course		2

****Studio courses are assessed a fee for special materials. This fee may vary from $10.00 to $135.00 per credit hour.**

BFA Degree with Art Education Minor* Requirements

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

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

Studio	68
Art History	17
Liberal Arts Core	19
Education Core	31
Senior Project	0
Total degree credit hours	**135**

Students must also complete:

The University Global Perspective requirement (see p. 2)
The University Lifetime Health & Wellness requirement (see p. 2)

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

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

Academic Requirements and Electives

For BFA students completing the Minor in Art Education, the Academic Requirements and Electives consists of the Liberal Arts Core and the Education Core required of the Minor and to satisfy New York State Education Department guidelines for Teacher Certification. (See the Division of Education description of the Art Education Minor on p. 165.)

Liberal Arts Core (19 credit hours)

SCIE 117	Integrated Science	4
or SCIE 127	Doing Science	
ENGL 101 or 102	Writing I or II	4
EDUC 230	Psychological Foundations of Education	3

Humanities (area B or D)

(take one from the following list)		4
HIST 107	The World in the 20th Century (D) (GP)	
HIST 110	The Making of Europe (D)	
HIST 111	Modern Western History (D) (GP)	
HIST 120	The Ancient Mediterranean (D)	
HIST 121	Medieval Cultures (D)	
HIST 151	The Rise and Fall of Iberia, 1450-1950 (D)	
HIST 211	American History I (D)	
HIST 212	American History II (D)	
PHIL 101	Introduction to Philosophy (B)	
PHIL 201	Existentialism (B)	
PHIL 281	Ethics (B)	
PHIL 283	Philosophy of the Arts I (B)	
RLGS 105	Introduction to World Religions (B) (GP)	
RLGS 240	Religion in American (B)	
RLGS 251	Who wrote the Bible? (B)	
RLGS 252	Judaism and Islam (B) (GP)	
RLGS 254	Birth of the Christian Tradition (B)	
RLGS 165	Asian Religions (B) (GP)	

Foreign Language

(take one from the following list)		4
CHIN 101	Chinese I	
FREN 101	French I	
GRMN 101	German I	
SPAN 101	Spanish I	
ITAL 101	Italian I	

Education Core (31 credit hours)

EDUC 231	Social Foundations of Education	3
EDUC 345	Education Fieldwork	4
EDUC 413	Using Literature in Intermediate and Adolescent Classrooms	3
or EDUC 405	Literacy in Content Area	
EDUC 463	Student Teaching-Art Education	12
EDUC 464	Seminar in Teaching/Prof Development	3
EDUC 491	Methods and Curriculum in Art Education	3
SPED 456	Human Development: Exceptionality	3

Typical Program

(Typical 4.5 year, 9-semester program)

First Year

ART 101	Foundations I *	8
ART 102	Foundations II**	8
ARTH 100-level	Art History (three 2-credit classes)	6
ENGL 101 or 102	Writing I or II	4
Humanities	100 or 200 level	4

Sophomore Year

ART 200-level	Sophomore Studios**	16
ART 282/83/84	Required Drawing (sophomore or junior year)	4
ARTH 211	Issues and Debates in Contemporary Art (fall only)	3
EDUC 230	Psychological Foundations of Education	3
EDUC 231	Social Foundations of Education	3
	Physical Education	2

Junior Year

ART 300-level	Junior Studios**	16
ARTH	Art History, upper level	4
EDUC 405	Literacy in the Content Area **or**	
EDUC 413	Using Literature in Intermediate and Adolescent Classrooms	3
SPED 456	Human Development: Exceptionality	3
SCIE 117	Integrated Science	4
or SCIE 127	Doing Science	
	Physical Education Activity Course	2

Senior Year

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

Ninth Semester

EDUC 463	Student Teaching-Art Education	12
EDUC 464	Seminar in Teaching/Prof Development	3

****Studio courses are assessed a fee for special materials. This fee may vary from $10.00 to $135.00 per credit hour.**

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

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

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

BS Degree Requirements:

Art/Design History and Supportive Courses: 42 credit hours

ARTH 120-129	Foundations in Art History (Non-Western)	2
ARTH 130-139	Foundations in Art History (Ancient-Baroque)	2
ARTH 140-149	Foundations in Art History (Modern Contemporary)	2
ARTH 211	Issues and Debates in Contemporary Art	3
PHIL 283	Philosophy of the Arts I	4
ARTH 300-level	4 junior-level Art History Courses: Non-Western, Ancient to Baroque, Modern to Contemporary	16
ARTH 400-level	2 Senior Level Art History Courses	8
ARTH 460	Art Historiography and Methodology	3
ARTH 499	B.S. Thesis in Art History and Theory	2

Studio: 24 credit hours

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

General Studies: 16 credit hours

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

Electives: 40 credit hours

Foreign Language	(especially French or German)	16
Academic courses	(as defined under BFA requirements)	16
Additional Electives	(selected under advisement)	8
Total credit hours for B.S. in Art History & Theory		**122**

Students must also complete:

The University Global Perspective requirement (see p. 2)
The University Lifetime Health & Wellness requirement (see p. 2)

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

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

Typical Program

First Year

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

Sophomore Year

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

Junior Year

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

Senior Year

Upper Level Art History		8
ARTH 460	Art Historiography and Methodology	3
ARTH 499	B.S. Thesis in Art History and Theory	2
Electives		16
Wellness Course		2-3

****Studio courses are assessed a fee for special materials. This fee may vary from $10.00 to $135.00 per credit hour.**

Minors Offered by the School of Art and Design

Minor in Art History

This minor provides a broad base of knowledge about art as it relates to history and culture, exposes students to a variety of theoretical and methodological issues and helps them develop critical and analytical skills that can be applied to art making.

The art history minor is available to BFA students who have successfully completed Art History Foundation required courses (ARTH 100-level requirement and ARTH 211). Sixteen additional credits in art history at the 300 and 400 levels are required to complete the minor. The Art History minor is also available to students in other colleges/schools at the University with the permission of the Division Chair.

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

Requirements for the Arts Management Minor

ACCT 211	Financial Accounting	3
BUSI 485	Internship (specific to Arts Management)	4
ECON 201	Principles of Microeconomics	4
MKTG 221	Marketing Principles and Management	3
Choose one additional business course from the following:		3
BUSI 201	Family Business Management	
BUSI 439	Entrepreneurship in the 21st Century	
Choose three courses from the following, at least one from each section A and one from section B.		8-12
Total credit hours		**25-29**

Section A- History and Theory

ARTH	Art History (any course)	2-4
DANC 211	Dance History	4

ENGL 241	Survey of American Literature	4
MUSC 110	Music Appreciation	4
MUSC 211	World Music	4
PHIL 283	Philosophy of the Arts I	4
PHIL 300	Topics in Philosophy (consult advisor)	1-4
THEA 110	Introduction to Theatre	4
THEA 311	Theatre History I	4
THEA 200/300/400	Topics in Theatre (consult advisor)	1-4

Section B-Applied and Studio Skills Courses

ART 111	Beginning Drawing	4
ART 121	Beginning Sculpture	4
ART 133	Beginning Photography	4
ART 151	Beginning Ceramics	4
ART 389	Exhibition Design (open only to Art and Design students)	2
DANC	Dance (any course)	1-4
ENGL 200	Special Topics in Writing	2-4
ENGL 202	Fiction Workshop	4
ENGL 205	The Play's the Thing! - Playwriting	4
ENGL 206	Poetry Workshop	4
ENGL 472	Dramatis Personae	4
ENGL 473	Auto/Biographical Acts	4
ENGL 474	Writing the Short Story	4
ENGL 475	Writing Formal Poetry	4
ENGL 476	Writing the Long Poem	4
PDAT 120	Technical Theatre	4
PDAT 220	Prin Theatrical/Performance Design	4
THEA 230	Stage Management Fundamentals	4
THEA 240	Acting I	4
THEA 270	Play Production	1-4
THEA 200/300/400	Topics (consult with advisor)	1-4

The Graduate Program

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

Performing Arts Division

Majors: Music, Theatre
Minors: Dance, Music, Performance Design & Technology, Theatre

Mission Statement

The Division of Performing Arts educates, enlightens and empowers students for lifelong growth and expression through individual and collaborative experiences in music, theatre, dance and design.

Vision Statement

We provide opportunities for involvement in the arts regardless of major or level of experience. Through embodied scholarship, physical practice, creative activity and intellectual inquiry, students learn to engage with the arts and community with depth and understanding.

General Education

Students majoring in Music or Theatre complete the Bachelor of Arts General Education program of the College of Liberal Arts and Sciences. (See p. 16)

Dance

The Performing Arts Division Dance Department offers students a rich and rewarding experience in the art of dance and dance making . It is open to students of all levels, regardless of experience or past training who want to include a dance practice in their academic experience. The Program encourages cross-disciplinary work in collaboration with visual art, sound design, music, performance art, and theatre – drawing from strengths unique and specific to Alfred University.

Those students who want to pursue deeper studies in dance can minor in dance. The dance minor is a composition based program that develops artistry in creating site specific performance, contemporary dance, and dance theater. Students can take classes in composition, improvisation, site specific composition, site specific performance, contemporary dance, jazz, dance history, repertory, and contact improvisation, as well as special topics classes.

The Marlin and Ginger Miller Dance Residency Program brings nationally acclaimed dance companies, choreographers, and artists to AU, offering phenomenal opportunities for students to work and learn with artists of the highest caliber.

Beyond the classroom, AU has a thriving student dance culture with a variety of dance clubs. Auditions for all productions and performance groups are open to all students, regardless of academic major or experience.

Requirements for the Dance minor:

Core Courses

DANC 120	Fundamentals of Dance	2
DANC 222	Modern I	2
DANC 230	Improvisation/Composition I	3
DANC 211	Dance History	4
DANC 270	Alfred U. Dance Theatre (taken twice)	4
DANC 330	Improvisation/Composition II	3
or DANC 331 Site Specific Composition (can be an elective)		

Electives in Dance (select 6 credit hours)

DANC 200	Special Topics	1-4
DANC 221/321	Ballet I and II	2
DANC 223/323	Jazz Dance I and II	2
DANC 224	Contact Improvisation	2
DANC 322	Modern Dance II	2
DANC 340	New and Existing Repertory	3
DANC 370	Choreography Practicum	2
DANC 450	Independent Study	1-4
Total credit hours		**24**

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

Music

Through the Performing Arts Division, the Music Department offers a Bachelor of Arts in Music major, as well as a Music minor. All AU students have many opportunities for musical study and performance, regardless of their college major. In addition to introductory music courses in theory and history, students can take classes in piano and voice. There are opportunities for private lessons in voice, and on a variety of instruments including the Carillon, and the Chinese Guhzeng. Students have access to fine pianos and practice rooms. String, brass, and woodwind instruments are available for students who do not have an instrument on campus.

Students may choose to participate in a variety of instrumental and vocal ensembles, both large and small, and to participate in chamber music groups, which are open to all students.

The Music Major

The BA in Music at Alfred University is for students who wish to achieve a high level of musical skill and knowledge by majoring in music within the context of a liberal arts education. This group includes students who plan to pursue graduate study or careers in music as well as those who plan careers in other fields. Students may combine musical study with study in other areas through a double major or dual degree.

Music Majors have the opportunity to complement their elective credits strategically and opt for a 4 + 1 with the MBA in our College of Business. Students may also minor in Arts Management to complement their major. The opportunity for such combinations will make the graduate attractive candidates for positions available in arts management and administration as well as prepare those interested in the business of private studio teaching.

Students receive private lessons, ensemble coaching, multiple performance opportunities, and a wide variety of music

courses through classroom instruction. Students have the option of completing a Senior Recital or a Capstone, an individually designed project in music.

The Purpose of the Bachelor of Arts in Music is to foster scholarship through the discipline of music.

After completing the BA Degree in Music, students are able to do the following:

1. Demonstrate technical and artistic proficiency on a primary instrument or voice
2. Contribute positively to musical ensembles and collaborate effectively with fellow ensemble members and ensemble directors
3. Use their knowledge and skills from performance, music theory, and music history, to write a critically about musical works and concepts
4. Demonstrate familiarity with the major composers, performers, musical styles, and cultural trends of all periods in the history of Western music

A video audition is required for admission to the program.

Requirements for the Music Major

Core Courses (19 credit hours)		
MUSC 120	Music Theory I	4
MUSC 220	Music Theory II	4
MUSC 320	Music Theory III/Composition	3
MUSC 3XX	Music History I	4
MUSC 3XX	Music History II	4

Skill Based Core Courses (19 credit hours)		
MUSC 121	Aural Skills I	1
MUSC 221	Aural Skills II	1
MUSC 130	Class Piano I	2
MUSC 131	Class Piano II	2
MUSC 100-108	Applied Lessons	4
MUSC 300-308	Advanced Applied Lessons	8
MUSC 271-279	Ensembles	0
MUSC 495	Senior Recital or Capstone	1-4

Electives (8 credit hours)		
MUSC 211	World Music	4
MUSC 212	American Music	4
MUSC 213	Introduction to Jazz	2
MUSC 214	Reel Music in America	4
MUSC 215	History of Rock Music	4
MUSC 200	Special Topics	2-4
Total credit hours for the Major		**46**

A Music minor is also available for those students who wish to major in another field, yet pursue their passion and development as musicians and artists.

Requirements for the Music Minor

Core Courses		
MUSC 110	Music Appreciation	4
MUSC 120	Music Theory I	4
MUSC 130	Class Piano I	2
MUSC 131	Class Piano II	2
MUSC 271-279	Music Ensembles	4
MUSC 101-108; 301-308	Private Lessons	4

Note: Technique classes such as Beginning Voice, may be substituted for one semester of private lesson.

Electives in Music (select 4 credit hours)		
MUSC 200	Special Topics	2-4
MUSC 211	World Music	4
MUSC 212	American Music	4
MUSC 213	Introduction to Jazz	2
MUSC 214	"Reel Music in America	4
MUSC 215	History of Rock Music	4
MUSC 220	Music Theory II	4
Total credit hours		**24**

Theatre

The Theatre major at Alfred University, housed in The Division of Performing Arts, provides students with inspired and balanced opportunities in theatre, anchored in well-rounded knowledge acquired through courses and production experiences. Our goal is to educate the "whole theatre artist" by producing high quality work that focuses on close collaboration among directors, designers, stage managers, crews, and actors. With courses and productions open to all students, theatre at Alfred promotes the development of skills and interdisciplinary knowledge. In addition, particularly for majors and minors the Alfred University Theatre experience integrates theory with practical development of skills, techniques, and creative expression. Students acquire in-depth understanding of theatre's many components and how they work together.

Areas of concentration include acting, design, directing, costume/set construction, scenic painting, technical theatre, stage management and arts administration. Theatre students actively participate in classes and events in music, dance and the visual arts.

The Theatre Department is an active member of the Kennedy Center American College Theatre Festival and the United States Institute of Theatre Technology. These memberships provide students with opportunities to be involved with theatre at a regional, national and international level. We aim to provide students with a solid foundation in order to succeed in graduate school or as professionals and to be life-long artists, technicians and learners.

Requirements for the Theatre major

Core Requirements: (29-31 credits)		
THEA 110	Introduction to Theatre	4
THEA 120 Technical Theatre		
or THEA 220 Design Fundamentals Stage/Dance/Film		4
THEA 212	From Page to Stage: Script Analysis	4
THEA 240	Acting I	4
THEA 311	Theatre History: Art, Politics and Society I	4
THEA 312	Theatre History: Art, Politics and Society II	4
THEA 430	Directing I	3
THEA 431	Directing II	3
or THEA 495 Senior Project		2-4

Electives in Theatre: (12 credits)		
PDAT 221	Costume Construction	3
PDAT 222	Stage Makeup	2
PDAT 320	Scene Design	3
PDAT 321	Lighting Design	3
PDAT 322	Stage Costume Design	3
PDAT 470	Adv Projects Theatrical Design & Tech	1-4
THEA 200/300/400 Special Topics		1-4
THEA 205	The Play's the Thing! Playwriting	4
THEA 230	Stage Management Fundamentals	2
THEA 242/342 Performance Lab		4
THEA 270	Play Production	1-4
THEA 340	Acting II	3

THEA 350	Independent Study	1-4
THEA 370	Advanced Play Production	1-4
THEA 385	Internship	2-4
THEA 431	Directing II	3
THEA 440	Acting III	3
THEA 490	Senior Seminar	1
THEA 495	Senior Project	2-4

Related Fields: (6 Credits)

ART 111	Beginning Drawing	4
ART 121	Beginning Sculpture	4
ART 133	Beginning Photography	4
ARTH	100-level	2
DANC 120	Fundamentals of Dance	2
DANC-technique (DANC 221, 222, 223, 321, 322, 323)		2
DANC 230, 330 Improvisation/Composition I, II		3
DANC 270	Alfred University Dance Theatre	2
DANC 211	Dance History	4
ENGL 225	Shakespeare in Cinema	2 or 4
ENGL 411	Shakespeare's Comedies and Histories	4
ENGL 412	Shakespeare's Tragedies	4
MUSC 100-108 Private Lessons		1
MUSC 110	Music Appreciation	4
MUSC 120	Music Theory I	4
MUSC 130-139 Voice, Piano, Strings Classes		2
MUSC 270-279 Music Ensembles		2
MUSC 301-308 Private Lessons, Advanced		2
PHIL 283	Philosophy of the Arts I	4
RLGS 307	Myth, Ritual and the Creative Process	4

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

Total credit hours required for major 47-49

Upon completion of this program students will be able to:

1. Understand the necessity of and the power of genuine collaboration in making theatre
2. Articulate and unite the principles of all components of theatrical art
3. Analyze any theatrical from the point of view of at least two of the theatre arts: Acting, Design, and Directing.
4. Outline their own experiences in each of the areas of theatre arts and thought as a means to map ways to further experiences.
5. Successfully apply their knowledge into a wide range of possible life directions beyond college
6. Communicate effectively and collaboratively across the many areas of theatre while participating in the development of a production
7. Explore possibilities of different styles of art, historical styles of theatre, and different stages to be able to make choices for production
8. Expand and apply research techniques to discover the art in an idea or script for performance, and the methods of acting and designing that yields an unified piece.
9. Through observation of events, experiences and social movements, using research and analysis, choose artistically satisfying methods in desired areas of production.

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

Requirements for the Theatre minor

Core requirements (15-16 credit hours)

THEA 110	Introduction to Theatre	4
THEA 212	From Page to Stage: Script Analysis	4
THEA 270/370 Play Production		4

Choose one of the following:

THEA 311	Theatre History I	4
THEA 312	Theatre History II	4
THEA 430	Directing I	3

Additional requirements (11 credit hours)

Choose one of the following:

PDAT 120	Technical Theatre	4
PDAT 220	Principles of Theatrical and Perf Design	3
PDAT 221	Costume Construction	4
THEA 240	Acting I	4
THEA 230	Stage Management Fundamentals	2
THEA 242	Performance Lab	4

Choose one of the following: (some courses may have prerequisites)

THEA 311	Theatre History I	4
THEA 312	Theatre History II	4
PDAT 320	Scene Design	3
PDAT 321	Lighting Design	3
PDAT 322	Costume Design	3
THEA 340	Acting II	3
THEA 430	Directing I	3
THEA 431	Directing II	3
PDAT 470	Adv Projects Theatrical Design & Tech	3-4

Choose additional theatre courses to satisfy minimum credit hours required

Total credit hours required for minor (minimum) 26

Performance Design and Technology

Our Performance Design & Technology program is unique in that it stands strong as an individual area of focus while also being integral to all areas of performing arts. This allows you to explore other interests and expand beyond theatrical design into dance, performance art, site-specific work and live entertainment. As a partner with theater, this allows you greater opportunities and support as you pursue your passion and career.

Requirements for the Performance Design & Technology minor

Foundation Requirements (14 to 16 credit hours)

PDAT 120	Technical Theatre	
or PDAT 221	Costume Construction	3-4
PDAT 220	Design Fundamentals Stage/Dance/Film	4
PDAT 270	Play Production	2
	One Performance Class (Studio Dance course, Music Ensemble, Participation in performance)	2
	One History Class (Theatre, Dance, Art History class)	3-4

Design/Tech Additional Requirements

Choose 2-4 credit hours from the following:

PDAT 200	Special Topics	1-4
THEA 212	From Page to Stage: Script Analysis	4

Choose 3 credit hours from the following:

PDAT 320	Scene Design	3
PDAT 321	Lighting Design	3
PDAT 322	Stage Costume Design	3
PDAT 370	Advanced Play Production	1-4

Capstone:

Choose 3 credit hours from the following:

PDAT 385	Internship	2-4
PDAT 470	Adv Projects Theatrical Design & Tech	1-4
PDAT 495	Senior Project	2-4

Total Credit Hours required (Minimum) 22

Kazuo Inamori School of Engineering

Biomaterials Engineering
Ceramic Engineerin
Glass Engineering Science
Materials Science & Engineering
Mechanical Engineering
Renewable Energy Engineering

The mission of the Kazuo Inamori School of Engineering is to provide academically challenging, inquiry-based programs to prepare technically proficient and broadly educated engineers and scientists at the bachelor, master, and doctoral levels. We offer these programs in a student-centered environment with a strong commitment to the personal, professional, and ethical 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 growth.

The School of Engineering offers six Bachelor of Science, six Master of Science and three Ph.D. degrees. The Bachelor of Science (BS) degree programs in Ceramic Engineering (CE), Glass Engineering Science (GES), Materials Science and Engineering (MSE), and Mechanical Engineering (ME) are accredited by the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore, MD 21202-4012, telephone (410) 347-7700. The Biomaterials Engineering (BME) and Renewable Energy Engineering (RNEW) degree programs are recent additions to the School and are not yet accredited; however, it is expected that the programs will seek ABET accreditation during the next regular review cycle.

Upon graduating with a BS degree in CE, GES, MSE, and ME, students are eligible to take the Fundamentals of Engineering (FE) examination, the next step towards registration as a Professional Engineer. Having passed the FE examination, the remaining two steps are: 1) four years of relevant post-baccalaureate experience and 2) passing the Professional Engineering (Principles and Practices) examination.

All Inamori School of Engineering faculty members have doctoral degrees, and all are engaged in teaching and research. With sponsorship from corporate entities, government agencies and philanthropic organizations, research expenditures average ~$5M annually. Faculty members often bring recent research results or examples from industry into their classroom teaching. Undergraduate students have opportunities to participate in research programs in the School and/or to participate in co-operative education or internship programs that have developed from faculty contacts with industry.

School of Engineering General Graduation Requirements

Credit Hour and GPA Requirement
To receive a Bachelor of Science degree from the School of Engineering, students must complete at least 128 credit hours and fulfill the requirements of the major, which may involve completing more than 128 credit hours. Students must achieve a GPA of at least 2.0 in major engineering courses in addition to a cumulative GPA of at least 2.0 required by Alfred University. No more than seven credits of D or D+ in core engineering courses taken at Alfred University may be applied for graduation in any program in the School of Engineering for students entering the University Fall 2014 and thereafter. Accumulation of excess D or D+ grades constitutes "low grades in critical prerequisite courses" per the Academic Standing requirements in this Catalog.

Written Communication Requirement
Students must complete ENGR 110, Technical Communication. To enroll in ENGR 110, students must successfully complete ENGL 101, or an equivalent course, or achieve specified scores on standardized tests. (See p. 77 for SAT/ACT score ranges.) Credits earned by successfully completing ENGL 101 or an equivalent course do not count towards the degree credit requirements.

Humanities/Social Science/Arts Requirement
All majors within the School of Engineering require at least 16 credits in humanities, social science and the arts (plus the 4 credit required course ENGR 110 Technical Communications for a total of 20 credits). Students are required to take the 1 credit Common Ground first-year curriculum which counts towards the humanities requirement. The remaining 15 credits can be fulfilled with courses having the following attribute codes: Literature (A), Philosophy or Religious Studies (B), The Arts (C), Historical Studies (D), Social Sciences (E), and Foreign Language (II). The on-line course system (Banner/DegreeWorks) provides information about which courses fulfill these area requirements. Additional courses in the five discipline areas (with or without a letter designation) may be used to meet the credit requirement, but no more than 4 credits of coursework in discipline area C (The Arts) will count towards the requirement. Courses that meet Quantitative Reasoning (III) do not count towards the Humanities/Social Science/Arts requirement.

Seminar Requirement
Students must enroll in and successfully pass ENGR 360 Undergraduate Seminar (or ENGR 160 First-Year Seminar, as appropriate) each semester they are enrolled fulltime in one of the School of Engineering degree programs.

Engineering Major Requirements

Biomaterials Engineering (BME)
Advanced materials are needed for biomedical applications. Implantable devices like pacemakers, defibrillators, and artificial joints must be biocompatible while carrying out complex chemical, mechanical, and electrical functions. Sensors used in medical diagnostics must recognize pathogens while ignoring a multitude of closely related molecules. The goal of the Biomaterials Engineering curriculum at Alfred University is to train next-generation biomaterials engineers to understand the basic principles of structure and function for both living and nonliving materials and to use these concepts to select or create materials for biomedical applications. The curriculum is a unique fusion of materials engineering/science and molecular cell biology 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 alternative careers such as dental school, medical school, law school, or the MBA.

BME Program Objectives
It is expected that, during the first few years after graduation: 1) Graduates will be qualified for careers in the medical device industry alongside related, and general, materials fields. Graduates will occupy positions with high technical skill requirements and managerial responsibility.

2) Graduates will be prepared to continue their educational endeavors in both technical and non-technical fields including graduate studies in Biomedical Engineering, Tissue Engineering, Medical Devices, general materials and other science and engineering majors; MBA programs, medical and veterinary schools, law school or short course/workshops applicable to growth within a chosen technical field.
3) Graduates will be prepared to lead in the development of their professions including society activities, scholarly publications and student recruiting and mentoring.

BME Degree Requirements and Curriculum
In addition to Alfred University's Lifetime Health & Wellness requirement and Global Perspective requirement and the School of Engineering general requirements, the requirements for the Bachelor of Science in Biomaterials Engineering are:

BIOL 150	Biological Foundations	4
BIOL 211	Cell Biology	4
BIOL 402	Immunology	4
CEMS 214	Structure and Properties of Materials	3
CEMS 215	Microscopy and Microstructural Characterization	3
CEMS 216	Bonding and Structure of Materials	3
CEMS 235	Thermodynamics of Materials	4
CEMS 237	Thermal Processes in Materials	4
CEMS 251	Mechanics of Materials	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/Optical	4
CEMS 368	Introduction to Bioengineering	3
CEMS 465	Biocompatibility	4
CEMS 466	Skeletal Tissue (or BIOL 307 Anatomy and Physiology)	3
CEMS 468	Biomedical Materials	3
CHEM 105	General Chemistry I	4
CHEM 106	General Chemistry II	4
CHEM 310	Basic Organic Chemistry (or CHEM 315/316)	3
ENGR 101	Introduction to Engineering	2
ENGR 102	Computer Aided Design	2
ENGR 104	Computer Aided Engineering	2
ENGR 110	Technical Communication	4
ENGR 11x	Exploration Labs (select 2, 1 credit each)	2
ENGR 305	Engineering Statistics	3
ENGR 306	Engineering Economics	2
ENGR 395	Engineering Design	2
ENGR 480	Senior Capstone Project	4
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 126	Physics II	4
Biology Electives		8
Technical Electives		3
Humanities, Social Science and Arts electives		16
Total Credit Hours		**134**

Ceramic Engineering (CE)
Ceramics are materials of basic living, of advanced technology, and of extreme environments. You encounter traditional ceramics every day of your life-dinnerware, bathroom fixtures, floor and wall tiles, and cement and brick structures.

You also encounter advanced ceramics every day, but often hidden from view-components in electronic devices (computers, mobile phones, tablets), sensors in automobiles, igniters in appliances. Finally, ceramics are 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, including some that haven't been invented yet.

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, achieving a Masters or Ph.D., and then going into research and/or teaching. Many ceramic engineering graduates, regardless of their initial path, achieve management positions (supervisors, plant managers, directors of research, etc.), and many end up owning their own companies.

CE Program Objectives
The objectives of the Ceramic Engineering program are as follows:

1) The graduates of our Ceramic Engineering program function as engineers in the field of ceramics or material science, serving the ceramic and related industries and academia, with the tools necessary to sustain a long and productive career in the field.
2) The graduates of our Ceramic Engineering program are innovators in the field of ceramic engineering, and related materials fields, and bring their background and hands-on experience to problem solving and the development of efficient and sustainable manufacturing practices.
3) The graduates of our Ceramic Engineering program will be able to design experiments, appropriately treat, evaluate, and interpret data generated in manufacturing processes (such as process control and loss data) or from experimental results, through statistical analysis, data presentation, etc., for the purposes of understanding trends, making predictions, and communicating effectively in the workplace.
4) The graduates of our Ceramic Engineering program bring professional expertise and organizational skills to their careers in industry or academia and relate science and technology to a wide range of technical fields.

CE Degree Requirements and Curriculum
In addition to Alfred University's Lifetime Health & Wellness requirement and Global Perspective requirement and the School of Engineering general requirements, the requirements for the Bachelor of Science in Ceramic Engineering are:

CEMS 203	Intro to Ceramic Powder Processing	3
CEMS 214	Structure and Properties of Materials	3
CEMS 215	Microscopy and Microstructural Characterization	3
CEMS 216	Bonding and Structure of Materials	3
CEMS 235	Thermodynamics of Materials	4
CEMS 237	Thermal Processes in Materials	4
CEMS 251	Mechanics of Materials	3
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/Optical	4
CEMS 349	X-ray Characterization	2
CHEM 105	General Chemistry I	4
CHEM 106	General Chemistry II	4
ENGR 101	Introduction to Engineering	2
ENGR 102	Computer Aided Design	2
ENGR 104	Computer Aided Engineering	2
ENGR 110	Technical Communication	4
ENGR 11x	Exploration Labs (select 2, 1 credit each)	2
ENGR 305	Engineering Statistics	3
ENGR 306	Engineering Economics	2
ENGR 395	Engineering Design	2
ENGR 480	Senior Capstone Project	4
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 126	Physics II	4
Ceramic Electives		8
Technical Electives		13
Humanities, Social Science and Arts electives		16
Total Credit Hours		**133**

Glass Engineering Science (GES)

Glasses have been used for thousands of years--in drinking glasses, storage bottles, prized decorative objects, and jewelry. Glasses have these same uses today, but glasses are truly high-technology materials used in optical applications, as sophisticated windows that control light and heat, and in fiber optics that make high-speed, high-capacity voice and data communications possible. Glasses are essential components of many medical devices, such as X-ray tubes, endoscopes, and lasers.

Advanced testing is being done on using small glass spheres that are injected into the bloodstream to carry radiation or chemotherapy agents directly to the liver to attack cancers.

Most glass products are made from abundant raw materials, such as sand and soda, and glasses are recyclable. In fact, in some countries, glass containers are made using over 90% recycled glass. There are numerous opportunities for new applications for glass, the development of new glasses, and further efficiencies in glass manufacturing. You can't imagine life today without glass, and that will be even more the case in the future.

Glass Engineering Science graduates are highly sought after by the glass industry and by companies that use glasses in processes or products. The Glass Engineering Science program is unique. There simply isn't another program like it in the United States. Graduates can oversee glass production, work on developing new processes and products, test glass products, or work in technical sales. Many choose to continue their education, obtaining a Masters or Ph.D., preparing them for research or teaching at a college or university. With time, and the time may be very short, many will become managers or owners of their own companies.

GES Program Objectives

The program objectives of the Glass Engineering Science Program are as follows:

1) Graduates of the Glass Engineering Science Program will be materials engineers with an in-depth knowledge of the science, engineering and manufacturing of Glass. Having acquired the necessary technical and personal skills the graduates will have embarked on a fulfilling career path.

2) Graduates of the Glass Engineering Science Program will have detailed knowledge of glass and related materials, with hands-on experience for problem solving enabling their ability to innovate within their chosen field.

3) Graduates of the Glass Engineering Science Program will be able to design, produce and characterize glass and related materials and use that information to conduct independent research or solve manufacturing problems.

4) Graduates of the Glass Engineering Science Program will operate as ethical and effective professionals and will have the skills necessary to clearly communicate and to function on interdisciplinary teams.

GES Degree Requirements and Curriculum

In addition to Alfred University's Lifetime Health & Wellness requirement and Global Perspective requirement and the School of Engineering general requirements, the requirements for the Bachelor of Science in Glass Engineering Science are:

CEMS 214	Structure and Properties of Materials	3
CEMS 215	Microscopy and Microstructural Characterization	3
CEMS 216	Bonding and Structure of Materials	3
CEMS 235	Thermodynamics of Materials	4
CEMS 237	Thermal Processes in Materials	4
CEMS 251	Mechanics of Materials	3
CEMS 322	Introduction to Glass Science	3
CEMS 325	Glass Laboratory	2
CEMS 328	Industrial Glass and Glass-Ceramics	3
CEMS 342	Thermal and Mechanical Properties	4
CEMS 344	Properties II: Electrical/Magnetic/Optical	4
CEMS 347	Spectroscopy	2
CEMS 349	X-ray Characterization	2
CEMS 324	Mass Transport in Glasses and Melts	3
CHEM 105	General Chemistry I	4
CHEM 106	General Chemistry II	4
ENGR 101	Introduction to Engineering	2
ENGR 102	Computer Aided Design	2
ENGR 104	Computer Aided Engineering	2
ENGR 110	Technical Communication	4
ENGR 11x	Exploration Labs (select 2, 1 credit each)	2
ENGR 305	Engineering Statistics	3
ENGR 306	Engineering Economics	2
ENGR 395	Engineering Design	2
ENGR 480	Senior Capstone Project	4
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 126	Physics II	4
Technical Electives		19
Humanities, Social Science and Arts electives		16
Total Credit Hours		**132**

Materials Science and Engineering (MSE)

Advanced materials are critical to nearly every modern technology (electronics, transportation systems, and medical devices). They also play an important role in the solutions to energy and environmental problems we face today. Materials Science and Engineering (MSE) is the broad interdisciplinary field that uses the principles of chemistry, physics, engineering, and biology to develop the improved materials. With an increased focus on nanotechnology, the field is advancing rapidly and will be at the heart of new technologies that we haven't even envisioned.

A materials engineer may specialize in a specific material class (ceramics, metals, polymers) or a specific area of materials science (electrical properties, mechanical properties, processing, testing, etc.), but should possess a broad background in materials science and engineering. Increased emphasis on cost, weight, and size reduction, while still improving product performance, creates challenges for monolithic materials, and opportunities for composites and other new materials. Miniaturization of components frequently is limited by the interactions of dissimilar materials at a microscopic scale. A materials engineer must be able to optimize the overall performance of complex systems involving several materials. In many industries, several materials may be competing for the same market (e.g., polymer composites versus metallic aircraft structures, and ceramic versus metallic engine components). In these applications, a materials engineer must be able to make an unbiased decision in selecting the best material (or combination of materials), which requires a fundamental understanding of the properties and performance of each of the competing materials.

The broad technical base of the Materials Science and Engineering degree prepares graduates for employment in a wide range of industries, including electronics, automotive, and aerospace, as well as for graduate school in engineering and science. Graduates of this program are particularly well suited to work for smaller companies that need materials engineers with a broad background, rather than people specialized in particular fields. Many companies involved in manufacturing require engineers with this broad materials background who can specify materials selection, oversee production, or maintain quality control.

MSE Program Objectives
Graduates of AU's Materials Science and Engineering Program will:

1) Be employed in materials-related industries and will continue to move into positions with both increased technical skill requirements and increased managerial responsibilities.
2) Be engaged in continuing their education and lifelong learning in both technical and non-technical fields including graduate studies in Materials Science and Engineering, and other science and engineering majors; MBA programs; medical school; law school; or short course/workshops applicable to growth within a chosen technical field.
3) Become leaders in the development of their professions including professional society activities, conference presentations, scholarly publications, and student recruiting and mentoring.

MSE Degree Requirements and Curriculum
In addition to Alfred University's Lifetime Health & Wellness requirement and Global Perspective requirement and the School of Engineering general requirements, the requirements for the Bachelor of Science in Materials Science and Engineering are:

CEMS 214	Structure and Properties of Materials	3
CEMS 215	Microscopy and Microstructural Characterization	3
CEMS 216	Bonding and Structure of Materials	3
CEMS 235	Thermodynamics of Materials	4
CEMS 237	Thermal Processes in Materials	4
CEMS 251	Mechanics of Materials	3
CEMS 314	Ceramic Processing Principles	3
or CEMS 316	Chemical Processing in Ceramics	
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/Optical	4
CEMS 347	Spectroscopy	2
CEMS 349	X-ray Characterization	2
CEMS 446	Composite Design and Fabrication	3
CHEM 105	General Chemistry I	4
CHEM 106	General Chemistry II	4
ENGR 101	Introduction to Engineering	2
ENGR 102	Computer Aided Design	2
ENGR 104	Computer Aided Engineering	2
ENGR 110	Technical Communication	4
ENGR 11x	Exploration Labs (select 2, 1 credit each)	2
ENGR 220	Circuit Theory I	4
ENGR 305	Engineering Statistics	3
ENGR 306	Engineering Economics	2
ENGR 395	Engineering Design	2
ENGR 480	Senior Capstone Project	4
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 126	Physics II	4
Technical Electives		12
Humanities, Social Science and Arts electives		16
Total Credit Hours		**133**

Mechanical Engineering (ME)
Mechanical Engineering is an ideal education for professional entrance into industry, for development of one's own company, or for a variety of opportunities in educational institutions and government agencies. A bachelor's degree in Mechanical Engineering may precede the study of law, business or medicine, and frequently graduate engineering studies. Because the undergraduate training is broad, as well as comprehensive, a mechanical engineer is in demand in practically every type of manufacturing, research and government organization. He/she may be employed in the automotive, aerospace, electrical, chemical, glass, ceramics, solar, petroleum, plastics, or metal-processing industries. The work may involve one or several of the following: design and testing of equipment and systems, supervision of production, sales engineering, plant engineering, research and development, and administration.

Some mechanical engineers work in areas not usually considered to require engineering expertise. For example, biomechanical engineers work with physicians to investigate the mechanics of the body and to design instruments and devices for medical purposes. Other mechanical engineers work closely with trainers and athletes, to design sports equipment. Certainly, the professional mechanical engineer has influenced most products and systems we deal with on a regular basis in our lives.

Some examples of mechanical engineering applications include:

- Applied Mechanics. Engineers apply mechanics principles to the study, design, and development of systems and components that transmit specified motion, forces, and power that withstand the stresses, strain, fatigue, shock, and vibration within the system itself.
- Controls. With the advent of the microprocessor, on-line data processing and control are incorporated into a variety of manufacturing and processing systems.

- Design. Design engineers combine a working knowledge of materials and components with the complexities and economics of assembling these components into products and systems.
- Energy, Engines and Power Plants. Engineers work with reciprocating and rotating engines utilizing gas combustion or steam pressure to generate power that is transmitted through shaft motion. Engineers make use of solar, wind, geothermal, nuclear and fossil-fuel sources to generate power.
- Fluids. Utilizing the various properties of fluids such as density, viscosity, and compressibility, engineers develop applications with these fluids for new hydraulic control or power transmission devices.
- Lubrication. Engineers try to inhibit the wear on moving parts by choosing or developing a lubricating method that minimizes friction and energy dissipation.
- Heating, Ventilating, and Air-Conditioning (HVAC). HVAC engineers must understand heat transfer, thermodynamics, and control theory to develop energy-efficient systems that control temperature and air quality.
- Materials. Mechanical engineers select, develop, and apply materials for bearings, brakes, clutches, gears, chains, screws, bolts, lubrication, insulation, heat transfer, and so on.
- Pressure Vessels and Piping. Containment structures for solids, liquids and gases are developed to withstand temperatures and pressures, which may vary dynamically.
- Transportation and Aerospace. Engineers in this specialty are engaged in the production or study of the motion of automobiles, trains, ships, planes, missiles, satellites, and rockets. Among their many responsibilities, they may develop improved gasoline or diesel engines, improve automobile power train transmission characteristics, modify the configuration of aircraft structures, or improve solid propellant rocket engines.

ME 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.

ME Degree Requirements and Curriculum

In addition to Alfred University's Lifetime Health & Wellness requirement and Global Perspective requirement and the School of Engineering general requirements, the requirements for the Bachelor of Science in Mechanical Engineering are:

CEMS 214	Structure and Properties of Materials	3
CHEM 105	General Chemistry I	4
CHEM 106	General Chemistry II	4
ENGR 101	Introduction to Engineering	2
ENGR 102	Computer Aided Design	2
ENGR 104	Computer Aided Engineering	2
ENGR 110	Technical Communication	4
ENGR 11x	Exploration Labs (select 2, 1 credit each)	2
ENGR 220	Circuit Theory I	4
ENGR 305	Engineering Statistics	3
ENGR 306	Engineering Economics	2
ENGR 395	Engineering Design	2
ENGR 490	Senior Capstone Project	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
MECH 211	Statics	3
MECH 212	Dynamics	3
MECH 241	Mechanics of Materials I	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 362	Kinematics and Dynamics of Machinery	3
MECH 364	Machine Design I	3
MECH 366	Manufacturing	3
MECH 417	Introduction to Finite Element Analysis	3
PHYS 125	Physics I	4
PHYS 126	Physics II	4
Mechanical Electives		6
Technical Elective		6
Humanities, Social Science and Arts electives		16
Total Credit Hours		**130**

Renewable Energy Engineering (RNEW)

Renewable energy systems is a high growth industry with a need for highly trained engineers who can improve the efficiency of current technologies as well as develop new ways to produce clean and affordable energy.

The Renewable Energy Engineering Program at Alfred University is dedicated to the study and practice of energy systems for a sustainable environment.

Our mission is to produce the next generation of engineers and scientists who will develop and perfect renewable energy systems, improve energy efficiency, and advance science and engineering to create a more sustainable future for our planet.

The RNEW program at AU integrates aspects of electrical and mechanical engineering with business in a systems-level approach as it relates to the generation, delivery and consumption of energy from renewable sources. Graduates of our program will work in the energy service industries which specialize in renewable systems. They will work in industry as professionals trained in government regulations. They will assist corporations in improving transmission and grid integration, power markets, utility operation and planning methods, and product management.

RNEW Program Objectives

The objectives of the Renewable Energy Engineering Program are to produce engineers who

1) Advance in a multidisciplinary career within the context of renewable energy in industry, or in advanced postgraduate studies, or in a related field.

2) Actively engage in teams that solve problems with independent thinking with a drive towards excellence in their job/study performance.
3) Adopt the engineering method with their lifelong learning skills and an understanding of complex social issues where renewable energy systems play a key role.

RNEW Degree Requirements and Curriculum
In addition to Alfred University's Lifetime Health & Wellness requirement and Global Perspective requirement and the School of Engineering general requirements, the requirements for the Bachelor of Science in Renewable Energy Engineering are:

CHEM 105	General Chemistry I	4
CHEM 106	General Chemistry II	4
ENGR 101	Introduction to Engineering	2
ENGR 102	Computer Aided Design	2
ENGR 104	Computer Aided Engineering	2
ENGR 110	Technical Communication	4
ENGR 11x	Exploration Labs (select 2, 1 credit each)	2
ENGR 220	Circuit Theory I	4
ENGR 305	Engineering Statistics	3
ENGR 306	Engineering Economics	2
ENGR 395	Engineering Design	2
ENGR 490	Senior Capstone Project	4
MATH 151	Calculus I	4
MATH 152	Calculus II	4
MATH 253	Calculus III	4
MATH 271	Differential Equations	3
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 Controls	3
PHYS 125	Physics I	4
PHYS 126	Physics II	4
RNEW 201	Intro to Renewable Energy	3
RNEW 255	Power Systems and Economics	3
RNEW 303	Software Engineering	4
RNEW 310	Fuel Cell Principles and Techniques	3
RNEW 320	Circuit Theory II	4
RNEW 322	Signals and Systems	3
RNEW 431	Wind Energy Systems	3
RNEW 432	Solar Energy Systems	3
RNEW 468	Electric Machinery	3
Technical Elective		6
Humanities, Social Science and Arts electives		16
Total Credit Hours		**130**

Undecided Engineering
Alfred University offers a first-year undecided option for engineering students who want a little more time to select a major. All of the engineering majors, except Biomaterials Engineering, share a common curriculum in the first semester, which includes Calculus I, General Chemistry I, Introduction to Engineering, Computer Aided Design, and an elective. In the second semester, undecided students enroll in Calculus II, General Chemistry II, General Physics I, Computer Aided Engineering, and two Engineering Exploration laboratories. By providing hands-on experiences related to different engineering majors, the Engineering Exploration labs are designed to help students select an engineering major.

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 intended for 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. Some minors have restrictions which prevent them from being taken by certain engineering minors, i.e. the Materials Science minor is not available to students majoring in Biomaterials Engineering, Ceramic Engineering or Glass Engineering Science.

Requirements for the Biomaterials Minor

BIOL 211	Cell Biology	4
CEMS 214	Materials Structure and Properties	3
CEMS 368	Introduction to Bioengineering	3
CEMS 468	Biomedical Materials (or CEMS 465 Biocompatibility)	3
CHEM 310	Basic Organic Chemistry (or CHEM 315)	3
Plus 2 courses from the following list:		
BIOL 302	General Microbiology	4
BIOL 307	Anatomy and Physiology	4
BIOL 308	Anatomy and Physiology	4
BIOL 375	Comparative Vertebrate Anatomy	4
BIOL 376	Animal Physiology	4
BIOL 402	Immunology	4
BIOL 420	Biochemistry: Proteins and Metabolism	4
BIOL 422	Biochemistry: Nucleic Acids	4
CEMS 466	Skeletal Tissue	3
Minimum total credit hours:		**23**

Requirements for the Glass Science Minor

CEMS 322	Introduction to Glass Science	3
CEMS 325	Glass Laboratory	2
CEMS 328	Industrial Glass and Glass-Ceramics	3
Plus at least 6 credits from the following list:		
CEMS 324	Mass Transport in Glasses and Melts	3
CEMS 420	Optical Glasses	3
CEMS 450*	Independent Study (in Glass)	1-3
ENGR 480	Senior Capstone Project (in Glass)	4
COOP 385*	Co-op Program (in Glass)	3
Minimum total credit hours:		**14**

Requirements for the Materials Science Minor

CEMS 214	Structure and Properties of Materials	3
CEMS 216	Materials Structure and Bonding	3
CEMS 235	Thermodynamics of Materials (or CHEM 343 or MECH 320, 3 credits)	4
Plus at least 6 credits from the following list:		
CEMS 203	Intro to Ceramic Powder Processing	3
CEMS 237	Thermal Processes in Materials	4
CEMS 3xx	Any regularly scheduled CEMS course at 300-level *except* CEMS 302	
CEMS 4xx	Any regularly scheduled CEMS course at 400-level *except* special topics and independent study	
Minimum total credit hours:		**15**

Note: The Materials Science Minor is not available to students majoring in Biomaterials Engineering, Ceramic Engineering, or Glass Engineering Science.

Requirements for the Mechanical Engineering Minor

MECH 211	Statics	3
MECH 212	Dynamics	3
MECH 241	Mechanics of Materials I	3
MECH 320	Thermodynamics I	3

MECH 324	Fluid Mechanics I	3
MECH 326	Heat Transfer	3
Choice of 300 or 400-level MECH course		3
Minimum total credit hours:		**21**

Requirements for the Renewable Energy Engineering Minor

RNEW 201	Sources of Renewable Energy	3
MECH 324	Fluid Mechanics	3
MECH 326	Heat Transfer	3
Plus at least 6 credits from the following list:		
CEMS 352	Electroceramics	3
RNEW 310	Fuel Cells Principles and Techniques	3
RNEW 431	Wind Energy	3
RNEW 432	Solar Energy Systems	3
Minimum total credit hours:		**15**

Minors in Other Areas of Study

Minors in nearly every other area of study at the University are open to students in the School. Minors in business, mathematics, chemistry, physics, and science policy are very compatible with the degree programs, since some upper-level courses in these areas can be used as technical electives. A minor in Business is facilitated by allowing two courses required for the Business minor, MKTG 221 and MGMT 328, to count as technical electives in CE, GES, and MSE. The Business minor can be used as the foundation for an MBA (see the section on MBA and Law Programs.)

Special Programs/Options/Opportunities

Cooperative Education (Co-op) and Internships

Undergraduate students have the opportunity to gain experience in a real engineering, research or manufacturing project at a company or national laboratory. Students in the co-op program commonly work during one of their junior year semesters during which they receive 3 academic credits; the sponsor pays a salary and some expenses.

Co-op work sites for students in our program are extensive and are distributed from Maine to California in companies big and small. Quality work experience is considered to be extremely valuable by employers hiring graduates for permanent positions. Over 70% of our students participate in a co-op or an internship (summer employment) in an engineering environment before graduating.

Study Abroad

Knowledge of a foreign language and culture is considered quite valuable by employers operating in a global economy. The University maintains direct exchanges with several partner universities which enable students to live and study outside the United Sates without impeding progress towards the degree. Engineering exchange partners include Ecole Nationale Superieure de Ceramique Industrielle (ENSCI) Limoges, France; University of Erlangen-Nurnberg, Erlangen-Nurnberg, Germany; University of Sheffield, Sheffield, England; and Universitat Jaume I, Castellon, Spain. For more information about study abroad and other international programs, please visit the International Programs website.

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 more than $5 million of sponsored research annually. This research has a positive impact on the undergraduate programs in many ways, including providing state-of-the-art equipment, generating new knowledge that gets discussed in classes, and maintaining contacts with industry. Also, many senior thesis projects are done in cooperation with companies or government laboratories. Opportunities for part-time work on funded research projects in the School are numerous. Many undergraduate students are hired for summer research positions in the School, and there are also opportunities for part-time work during the academic year.

Engineering/MBA Program

Students in any of the School of Engineering's undergraduate degree programs who complete the minor in Business Administration also will have completed the foundation courses for the MBA program at Alfred University. These students can obtain an MBA at Alfred in one year of graduate study.

Engineering/Law

Engineering graduates are well prepared for the study of law, including patent law. Students who have an interest in engineering/law should discuss this option with their advisor as early as possible in their program.

The 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 Financial Management Association, American Marketing Association, Enactus (Entrepreneurial Action Society), and the Institute of Management Accountants. In addition, the School has a Student-managed Investment Fund (SMIF) which allows students to participate in managing an active portfolio while gaining academic credit.

The College also sponsors national honor societies that recognize superior academic achievement by business students. Alfred University sponsors chapters in Alpha Iota Delta National Honor Society in Decision Sciences, Beta Gamma Sigma (exclusively for AACSB accredited schools), Delta Mu Delta Honor Society in Business Administration, Financial Management Association in Finance, Mu Kappa Tau in Marketing, the Pacioli Honor Society in Accounting, and the Omicron Delta Epsilon Honor Society in Economics.

Career Success

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

General Education Requirements

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

First Semester Seminar

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

Written Communication

Each student must successfully complete two semesters of college writing. Students may be exempt from these courses

based on strong college entrance exam scores, or Advanced Placement or International Baccalaureate courses completed in their high school programs.

Quantitative Reasoning

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

Humanities

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

Natural Sciences

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

Social Sciences

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

List of Approved Courses

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

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

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

Major and Minor Requirements

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

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.

The **Marketing** major provides students with applied experiences in new product development, market research and service learning. Marketing majors also take a required course in graphic design, where they are introduced to this creative process, and the importance of design in the professional practice of marketing. Many students enrich their classroom experiences through participation in the vibrant AU student chapter of the American Marketing Association.

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.

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

The College also offers **minors** in Accounting, Arts Management, Business Administration, 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.

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

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

Business Professional Core Requirements

ACCT 211	Financial Accounting	3
ACCT 212	Managerial Accounting	3
BUSI 105	Business Perspectives	1
BUSI 106	Contemporary Business	3
BUSI 457	International Business	3
or FIN 458	International Financial Management	
or ECON 412	International Economics	
or MKTG 489	International Marketing	3
BUSI 499	Business Policy	3
FIN 348	Managerial Finance	3
LAW 241	The Legal Environment of Business	3
MGMT 328	Management & Organizational Behavior	3
MGMT 484	Operations Management	3
MIS 101	Computers and Society	3
MIS 390	Intro Management Information Systems	3
MKTG 221	Marketing Principles and Management	3

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

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

Arts and Sciences Core

Quantitative Methods

BUSI 113	Business Statistics	3
BUSI 213	Research Methods for Business	3
MATH 104[1]	Quantitative Methods for Business	4

Communications

ENGL 101	Writing I	4
ENGL 102	Writing II[2]	4

Economics

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

1. MATH 151-Calculus I can substitute for MATH 104
2. Writing requirements are specified in the Catalog under General Education Requirements for Liberal Arts and Sciences, Basic Competencies, Written Communication.

Business Administration Major

Students opting for this major must take the courses listed above in the Business Professional core, plus one upper-level course in economics and business elective courses, to total a minimum of 48 credit hours in business. Students are encouraged to focus their business interests through selection of minors offered by the College of Business, as well as minors within the College of Liberal Arts and Sciences. The Arts and Sciences Core courses, general education requirements and arts and sciences electives to total a minimum of 60 credit hours, must also be completed.

Accounting Major

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

ACCT 361	Intermediate Accounting I	3
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
FIN 300+	one additional upper-level Finance course	3
LAW 442	Commercial Law	3

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.

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

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

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

HLPM 201	Health Care Delivery Systems	3
HLPM 205	Public Health	3
HLPM 301	Healthcare Policy	3
HLPM 310	Legal & Ethical Issues in Healthcare	3
ECON 420	Economics in Healthcare	3
HLPM 485	Internship: Health Planning & Manage.	3
HLPM 495	Seminar: Health Planning & Manage.	3

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

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

MKTG 310[1]	Graphic Design in Marketing	3
MKTG 452	Marketing Research	3
MKTG 479	Consumer Behavior	3
MKTG 486	Promotion Strategy	3
MKTG 499	Strategic Marketing Management	3

Plus, choose 3 credit hours from the following:

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

1. **ART 316 can be substituted for MKTG 310**

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

Accounting 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:

ACCT 211	Financial Accounting	3
ACCT 212	Managerial Accounting	3
ACCT 361	Intermediate Accounting I	3
BUSI 113[2]	Business Statistics (or equivalent)	3
ECON 201	Principles of Microeconomics	4
ECON 202	Principles of Macroeconomics	3
MATH 104[1]	Quantitative Methods for Business	4
Plus two courses from among the following:		
ACCT 310	Forensic Accounting	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	Advanced Taxation	3
Total credit hours		**32**

1. **MATH 151-Calculus I can substitute for MATH 104**
2. **MATH 241, ENGR 305, POLS/SOCI 230, or PSYC 220 may be substituted for BUSI 113**

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

Requirements for the Arts Management Minor

ACCT 211	Financial Accounting	3
BUSI 485	Internship (specific to Arts Management)	4
ECON 201	Principles of Microeconomics	4
MKTG 221	Marketing Principles and Management	3
Choose one additional business course from the following:		3
BUSI 201	Family Business Management	
BUSI 439	Entrepreneurship in the 21st Century	
Choose three courses from the following, at least one from each section A and one from section B.		8-12
Total credit hours		**25-29**

Section A- History and Theory

ARTH	Art History (any course)	2-4
DANC 211	Dance History	4
ENGL 241	Survey of American Literature	4
MUSC 110	Music Appreciation	4
MUSC 211	World Music	4
PHIL 283	Philosophy of the Arts I	4
PHIL 300	Topics in Philosophy (consult advisor)	1-4
THEA 110	Introduction to Theatre	4
THEA 311	Theatre History I	4
THEA 200/300/400	Topics in Theatre (consult advisor)	1-4

Section B-Applied and Studio Skills Courses

ART 111	Beginning Drawing	4
ART 121	Beginning Sculpture	4
ART 133	Beginning Photography	4
ART 151	Beginning Ceramics	4

ART 389	Exhibition Design (open only to Art and Design students)	2
DANC	Dance (any course)	1-4
ENGL 200	Special Topics in Writing	2-4
ENGL 202	Fiction Workshop	4
ENGL 205	The Play's the Thing! - Playwriting	4
ENGL 206	Poetry Workshop	4
ENGL 472	Dramatis Personae	4
ENGL 473	Auto/Biographical Acts	4
ENGL 474	Writing the Short Story	4
ENGL 475	Writing Formal Poetry	4
ENGL 476	Writing the Long Poem	4
PDAT 120	Technical Theatre	4
PDAT 220	Prin Theatrical/Performance Design	4
THEA 230	Stage Management Fundamentals	4
THEA 240	Acting I	4
THEA 270	Play Production	1-4
THEA 200/300/400	Topics (consult with advisor)	1-4

Business Administration Minor/Pre-MBA Program

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

Business Administration Minor Requirements:

ACCT 211	Financial Accounting	3
ACCT 212	Managerial Accounting	3
BUSI 113[1]	Business Statistics	3
ECON 201	Principles of Microeconomics	4
ECON 202	Principles of Macroeconomics	3
FIN 348	Managerial Finance	3
MGMT 328	Management and Organizational Behavior	3
MGMT 484[2]	Operations Management	3
MKTG 221	Marketing Principles and Management	3
Total credit hours		**28**

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

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:

ECON 201	Principles of Microeconomics	4
ECON 202	Principles of Macroeconomics	3
ECON 460	Seminar in Economics	3
ECON 300+	Upper-level Economics Course	3
ECON 300+	Upper-level Economics Course	3
Total credit hours		**16**

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:

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

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

EQUS 200	Topics (approval depending on content)	2-4
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
Total credit hours		**22**

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 Requirements:

ACCT 211	Financial Accounting	3
BUSI 301	Family Business Management	3
BUSI 439	Entrepreneurship in the 21st Century	3
BUSI 485	Internship	2-4
ECON 201	Principles of Microeconomics	4
LAW 241	The Legal Environment of Business	3
MKTG 221	Marketing Principles and Management	3

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

ACCT 371	Personal Income Tax	3
BUSI 460	Seminar (Topics) in Business	3
FIN 310	Introduction to Financial Planning	3
LAW 442	Commercial Law	3
Total credit hours		**24-26**

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 finance issues.

Finance Minor Requirements:

ACCT 211	Financial Accounting	3
ACCT 212	Managerial Accounting	3
ECON 201	Principles of Microeconomics	4
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

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

FIN 205	Student Managed Investment Fund	1
FIN 206	Student Managed Investment Fund Lab	1
FIN 306	Advanced SMIF Lab	2
FIN 453	Financial Markets and Institutions	3
FIN 454	Security Analysis	3
FIN 460	Seminar in Finance	3
Total credit hours		**31**

Health Planning and Management Minor

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

Health Planning & Management Minor Requirements:

ACCT 211	Financial Accounting	3
ACCT 212	Managerial Accounting	3
ECON 201	Principles of Microeconomics	4
ECON 202	Principles of Macroeconomics	3
HLPM 201	Health Care Delivery Systems	3
HLPM 205	Public Health	3
HLPM 301	Healthcare Policy	3
HLPM 310	Legal & Ethical Issues in Healthcare	3
Total credit hours		**25**

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:

(Language)	Two Semesters of one Modern Language	8
GLBS 101	Introduction to Global Studies	4
Plus, Complete 4 of the following Options:		9-12
BUSI 457	International Business	3
ECON 412	International Economics	3
FIN 458	International Financial Management	3
MKTG 489	International Marketing	3

International Experience (select one):

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

Total Credit Hours **21-24**

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:

SJST 101	Intro to Social Justice Studies	4
LEAD 201[1]	Equality and Leadership	2
MGMT 328	Management & Organization Behavior	3
LEAD 475[2]	Leadership Practicum	2
Plus, Complete at least 10 credits of the following:		10
ATHT 432	Organization & Administration of Athletics	2
COAC 291	Philosophy, Prin. & Org. of Athletics in Educ.	3
COAC 475	Theories & Techniques for Coaching Sport	2
COMM 210	Interpersonal Communication	4
COMM 309	Persuasion: Reception & Responsibility	4
COMM 315	Understanding Global Media & Change	4
COMM 325	Global Communication	4
COMM 409	Organizational Communication	4
COMM 401	Technology & Communication	4
COMM 410	Communication Ethics	4
COMM 465	Gender, Race, Class, & Media	4
ECON 425	Wealth & Inequality	4
ENGL 222	The Harlem Renaissance	4
ENGL 256	Multicultural American Literature	4
ENVS 214	Environment, Politics, & Society	4
GERO 118	Intro. to Adult Development & Aging	4
LEAD 300	Topics in Leadership	2
LEAD 476	Leadership Experience	2
PHIL 281	Ethics	4
PHIL 306	Personal Identity & The Self	2
POLS 214	Environment, Politics, & Society	4
POLS 253	Dictatorship and Democracy	4
POLS 271	World Politics	4
POLS 355	Public Policy	4
POLS 356	Social Movements	4
PSYC 282	Social Psychology	4
SJST 201	Women & Gender in Society	4
SOCI 242	Social Problems	4
SOCI 253	Social Welfare Institutions	4
SOCI 355	Power, Privilege, & Inequality	4
UNIV 115	Concepts of Service Learning	2
WGST 101	Women in Society	4
WGST 305	Gender & Organizations	3
Total credit hours		**21-23**

1. **WGST 201 can be substituted for LEAD 201**
2. **WGST 475 can be substituted for LEAD 475**

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.

Marketing Minor Requirements:

BUSI 113*	Business Statistics	3
ECON 201	Principles of Microeconomics	4
MKTG 221	Marketing Principles and Management	3
MKTG 479	Consumer Behavior	3
Plus six credit hours from among the following courses:		
MKTG 310	Graphic Design in Marketing	3
MKTG 452	Marketing Research	3
MKTG 453	Marketing Practicum	3
MKTG 460	Seminar in Marketing	3
MKTG 482	Sales Management	3
MKTG 486	Promotion Strategy	3
MKTG 489	International Marketing	3
MKTG 499	Strategic Marketing Management	3
Total credit hours		**19**

*** ENGR 305 or POLS/SOCI 230, or PSYC 220, or Math 241 may be substituted for BUSI 113**

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:

ATHT 232	Introduction to Sports Management	
ATHT 432	Organization & Administration of Athletics	2
BUSI 485	Internship (in a sports-related business)	2-4
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
Total Credit Hours		**23-25**

List of Approved Courses for General Education Program

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

Quantitative Reasoning
BUSI 113, 213
ENVS 205
MATH 101, 102, 104, 151
MIS 101
POLS 230
PSYC 220
SOCI 230

Humanities
ARTH – 210, all 300+ level courses
CHIN 101, 102, 201, 202
COMM 205, 412
DANC 211
ENGL 200, 202, 205, 206, 211, 213, 214, 220, 225, 226, 230, 243, 256, 281, 293, 325, 326, 327, 328, 400, 406, 407, 408, 410, 411, 412, 413, 414, 415, 422, 424, 431, 432, 433, 434, 442, 445, 459, 472, 474, 475, 476, 481
FREN 101, 102, 201, 202, 210, 302, 311, 316, 420
GLBS 210, 215, 216
GRMN 101, 102
HIST 107, 111, 120, 121, 152, 200, 211, 212, 223, 300, 301, 303, 307, 308, 309, 310, 311, 321, 322, 323, 324, 328, 329, 372, 375, 377, 383
IART 200
ITAL 101, 102
LATN 101, 102
MUSC 110, 120, 211, 212, 214, 215, 220
PDAT 220
PHIL 101, 105, 201, 202, 281, 282, 283, 304, 305, 306, 309, 310, 311, 312, 328, 341, 383, 388, 390, 400
POLS 304
PSYC 306, 309
RLGS 105, 165, 274
SJST 217, 226, 304, 307, 341, 382
SPAN 101, 102, 200, 201, 202, 213, 215, 216, 217, 218, 300, 301, 311, 315, 316, 360
THEA 110, 205, 211, 212, 220, 311, 312
WGST 215, 216, 256, 324, 382, 408, 412, 481

Natural Science
ASTR 103, 107, 303, 304, 307
ATHT 205, 222, 392, 393
BIOL 101, 102, 105, 106, 107, 108, 119, 130, 131, 150, 155, 207, 208, 357
CHEM 105, 106, 310, 315, 316, 321, 343, 345, 346, 372, 374, 400, 420, 423, 461, 490
ENVS 101, 106, 120, 310, 351, 357
GEOL 101, 104, 106, 110, 201, 301, 302, 307, 408, 414, 464
PHYS 111, 112, 125, 126, 325, 326, 341, 41, 405, 410, 421, 423, 424
SCIE 110, 111, 115, 117, 127

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

AU Wellness
ATHT 222
BIOL 105
PSYC 251, 322
WELL 101

AU Written Communication
ENGL 101, 102

Course Descriptions

The courses listed in this catalog are active as of Fall 2019, which means they could be offered in any given term. To view courses actually offered and scheduled for a particular term go to AU BannerWeb, select Class Schedule, and then select a semester or other term.

Course Numbering System

Courses offered at Alfred University are numbered as follows:

001–099 Courses of a remedial nature that do not carry credit toward any University degree.

100–199 Courses without prerequisites primarily for undergraduate students in their first year of study.

200–299 Courses with or without prerequisites primarily for undergraduate students in their first or second year of study.

300–399 Courses usually having prerequisites and offered primarily for undergraduate students in their third or fourth year of study.

400–499 Advanced courses primarily for undergraduate students in their fourth year of study.

500–599 Courses primarily for graduate students. With permission of the instructor, undergraduate seniors in good standing may enroll in these courses for undergraduate or graduate credit. (May count for graduate credit only if not required to complete the undergraduate degree.)

600–699 Advanced graduate courses open only to graduate students.

University Courses

UNIV 101 - Common Ground 1 hour**.** 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.
Course Attribute(s): SoE: Other Humanities/Soc Sci

UNIV 102 - Career and Professional Success 1 hour. In this course students develop and hone their job search skills. This includes creating and implementing a job search plan, resume and cover letter development, professional etiquette and business protocol, company research, effective networking, "dressing for success," interviewing and salary negotiation, and transitioning from college to the world of work. Students have an opportunity to connect both formally and informally with employers, alumni, and students through dinners, networking receptions, career events, and panel discussions.

UNIV 103 - Dynamics of Student Success 1 hour. This course is designed to enhance the university learning experience and prepare students for academic, personal, and professional success. In addition to analyzing various models of thinking and engaging in self-reflection, students explore skills and strategies to support them in their learning. May be repeated one time for credit (up to a total of 2 credit hours).

UNIV 107 - Wilderness Immersion and Leadership Discovery 2 hours. This leadership development and service learning course takes place entirely outdoors with a focus on problem solving, teamwork, and leadership skills facilitated through experiential elements such as friction fire building, survival and rescue, wilderness first aid, shelter construction, and more.
Course Attribute(s): AU: Service Learning Courses

UNIV 110 - Drawn to Diversity 2 hours. The D2D program uses the CRAFT Model (Contact, Research, Action, Feedback, and Teaching) to produce Community Based-Art, which strives to strengthen a community by providing a creative outlet for all voices to be respectfully shared.

UNIV 115 - Concepts of Service Learning 2 hours. This course explores service learning as a way of accomplishing and demonstrating civic engagement through weekly class discussions, reflective writing, and weekly service hours in the local community. Each student selects a service project to satisfy the main requirement of at least 4 hours of service work per week. Service projects vary from term to term. (Cross-listed as SJST 115)
Course Attribute(s): AU: Service Learning Courses

UNIV 100, 200, 400 - Special Topics 1-4 hours.

UNIV 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

Cooperative Education

COOP 385 - Cooperative Education 3 hours. Students are employed off-campus in a position directly related to their academic and career goals. Off-campus arrangements are handled by the Career Development Center. May be repeated one time for credit, but not usually in two consecutive semesters. Prerequisite: Junior standing.

Military Science

Military Science courses are available to Alfred University students through the ROTC program at St. Bonaventure University. Introductory courses are offered in Alfred; advanced courses are offered at St. Bonaventure University.

MS 101/101L-Foundations of Officership 2 hours. (Course and lab) The purpose of this semester is to introduce cadets to fundamental components of service as an officer in the United States Army. These initial lessons form the building blocks of progressive lessons in values, fitness, leadership, and officership. Additionally, the semester addresses "life skills" including fitness, communications theory and practice (written and oral), and interpersonal relationships. (Offered Fall)
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

MS 102/102L-Basic Leadership 2 hours**.** (Course and lab) This course, available to all students without any military obligation, is designed as a classroom and optional lab course that stresses the fundamentals of leadership. The course goals are to provide students with leadership and managerial skills that will prepare them to lead in public service, business, military and community organizations. This course uses a military model to train leadership development through an introduction to problem solving, effective decision making techniques, and delves into several aspects of communication and leadership theory. (Offered Spring)

MS 201/201L-Individual Leadership Studies 3 hours. Course and lab) Building upon the fundamentals introduced in the first 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. (Offered Fall)

MS 202/202L-Leadership and Teamwork 3 hours. The final semester of the Basic Course focuses principally on officership, providing an extensive examination of the unique purpose, roles and obligations of commissioned officers. It includes a detailed look at the origin of our institutional values and their practical application in decision making and leadership. (Offered Spring)

MS 301/301L-Leadership Problem Solving 4 hours. (Course and Lab) The 300 level curriculum is intended to build leadership competencies and facilitate the cadet's initial demonstration of individual leadership potential at Leader Development and Assessment Course (LDAC), while also preparing cadets for their future responsibilities as officers. MSL 300 level instruction uses small unit infantry tactics as the context for the development and assessment of leadership. While a measure of technical and tactical understanding of small unit operations is necessary, the focus of instruction in on the leadership competencies. (Offered Fall)

MS 302/302L-Leadership and Ethics 4 hours. (Course and Lab) The final semester of the MSL III year continues focusing on doctrinal leadership and tactical operations at the small-unit level. This critical semester synthesizes the various components of training, leadership and team building. The MSL 302 curriculum complements progression through the cadet's campus evaluation process and in the culminating event of the MSL III year in the field training environment of the Leader Development and Assessment Course (LDAC). (Offered Spring)

MS 401/401L-Leadership and Management 4 hours. (Course and Lab) This semester of the Advanced Course concentrates on leadership, management and ethics, and begins the final transition from cadet to lieutenant. The course focuses cadets, early in the year, on attaining knowledge and proficiency in several critical areas they will need to operate effectively as Army officers. These areas include: Coordinate Activities with Staffs, Counseling Theory and Practice within the "Army Context," Training Management, and Ethics. (Offered Fall)

MS 402/402L-Officership 4 hours. (Course and Lab) The final semester focuses on completing the transition from cadet to lieutenant. The course starts with a foundation in the legal aspects of decision making and leadership. Following modules reinforce the organization of the Army and introduce how the Army organizes for operations from the tactical to strategic level. Instruction on administrative and logistical management focuses on the fundamentals of soldier and unit level support. The final module focuses on the process of changing duty stations and reporting to a new unit. The Capstone Exercise requires the cadets, both individually and collectively, to apply their knowledge to solve problems and confront situations commonly faced by junior officers. (Offered Spring)

Off-Campus Study

OCST 301 - Cultural Orientation, Reflection and Engagement 2 hours. Required for semester- or year-long study abroad participants, this course extends over three semesters: before you go abroad, while abroad, and upon return. It explores the concept of culture, intercultural communication, cultural adjustment and competence, and your host country knowledge. (Offered in the second-half of each semester)
Course Attribute(s): AU: Global Perspective

Physical Fitness Courses

PFIT 100 - Special Topics 1 hour. Offerings vary year to year depending on the availability of faculty with expertise in the particular physical fitness activity.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

PFIT 101 - Cross Training 1 hour. Combined weight training exercises and cardiovascular activities designed to improve strength, flexibility, cardiorespiratory fitness, and body composition.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

PFIT 103 - Cardiovascular Fitness 1 hour. 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.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

PFIT 105 - Beginning Badminton 1 hour. 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.
Course ttribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

PFIT 108 - Introduction to Yoga 1 hour. 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.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

PFIT 110 - Downhill Skiing 1 hour. 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.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

PFIT 112 - Beginning Golf 1 hour. 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.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

PFIT 113 - Snowboarding 1 hour. 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.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

PFIT 115 - Total Fitness 1 hour. 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.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

PFIT 118 - Weight Training 1 hour. 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.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

PFIT 125 - Karate 1 hour. 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.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

PFIT 129 - Beginning/Intermediate Swimming 1 hour. Students are exposed the to the basic strokes with emphasis on achieving confidence in the water, and have anb opportunity to perfect strokes and increase endurance.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

PFIT 130 - Advanced Swimming 1 hour. Advanced strokes and swimming skills are presented along with some racing and diving techniques. Prerequisite: PFIT 129 or permission of instructor.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

PFIT 131 - Lifeguard Training 1 hour. 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.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

PFIT 133 - Basic Tennis 1 hour. 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.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

Wellness (WELL) Courses
WELL 100 - Special Topics 1-4 hours. Offerings vary year to year depending on the availability of faculty with expertise in a particular health or wellness area.
Course Attribute(s): AU: Wellness (Fall '19)

WELL 101 - Foundations of Wellness 2 hours**.** Wellness is a journey into personal transformation; the integration of body, mind, and spirit. Topics covered in this course include enhancing self-actualization, self-responsibility, peace of mind, attitude change, and balance at several experiential levels. Exploration in each of these separate realms examines physical, mental, emotional, social, environmental, and spiritual life enhancing techniques. (Offered every term)
Course Attribute(s): AU: Wellness (Fall '19)

Courses Offered by the College of Liberal Arts and Sciences

Anthropology
ANTH 110 - Cultural Anthropology 4 hours. This introductory course surveys the human condition in anthropological perspective. Emphasis is on the nature of culture, sociocultural evolution, human ecology, theoretical strategies, kinship, descent, gender, language, and belief systems.
Course Attribute(s): AU: Global Perspective, CLAS: (E3) Soc Sci-Soc/Anth, CoB: Social Science, SoAD: Humanities-'Other'

ANTH 120 - Human Origins 4 hours. An introduction to physical anthropology surveying evolutionary theory as applied to humans. Special emphasis on non-human primates, fossil man (hominid evolution) and the diversity of modern human populations.
Course Attribute(s): CLAS: (E3) Soc Sci-Soc/Anth, CoB: Social Science

ANTH 200 - Special Topics 1-4 hours. An open course varying in content from year to year which allows concentration in specialized areas.

ANTH 300 - Special Topics 1-4 hours. An open course varying in content from year to year which allows concentration in specialized areas.

ANTH 302 - The Nacirema 4 hours. American culture and society in cross-cultural perspective. This course emphasizes themes observed by international visitors and by anthropologists in cross-national studies. ANTH 110 recommended as a prerequisite.
Course Attribute(s): CoB: Social Science

ANTH 303 - Health and Culture 4 hours. An examination of the interaction of culture and biology in the broad realm of physical and mental health and illness. Topics include non-Western healers and healing practices, theories of disease and healing, cultural psychiatry, and epidemiology. Prerequisite: ANTH 110.
Course Attribute(s): AU: Global Perspective, CoB: Social Science

ANTH 304 - Language and Culture 4 hours. An introduction to anthropological linguistics emphasizing the origin, nature and evolution of human language; the Sapir-Whorf hypothesis, sociolinguistics (especially the linguistic aspects of gender and class), and nonverbal behavior. Prerequisite: ANTH 110. Recommended: 200-level foreign language course.
Course Attribute(s): AU: Global Perspective, CoB: Social Science

ANTH 309 - Magic and Religion 4 hours. An examination of the diversity to be found among human religious beliefs and practices. Includes the relationship between magic, science and religion, the functions of witchcraft, divination and spirit possession and the role of religion in cultural revitalization. Prerequisite: ANTH 110 or permission of instructor. (Offered on demand)
Course Attribute(s): AU: Global Perspective, CoB: Social Science

ANTH 312 - Violence and Culture 4 hours. In this course we investigate violence in traditional and modern societies. Topics include ritualized violence, gender, the sociocultural construction and reinforcement of violent behavior in the United States, and programs aiming to reduce levels of violence. Prerequisite: ANTH 110 or SOCI 110 and junior or senior standing.
Course Attribute(s): AU: Global Perspective, CoB: Social Science

ANTH 321 - Online Online: Weblife and Its Effects 4 hours. This course explores questions raised about the consequences of our extensive time spent online. It examines patterns of social behavior, thinking, reading, focus, and censorship through online readings and students? experiences. Prerequisites: ANTH 110 and SOCI 110 recommended; not required.
Course Attribute(s): CoB: Social Science

ANTH 400 - Special Problems in Anthropology 1-4 hours. An open course varying in content from year to year which allows concentration on such specialized areas as gender and society, anthropological theory and methods, native cultures of North America, demography, and the like. Prerequisites: SOCI 110 or ANTH 110 and junior or senior standing or permission of instructor. (Sufficient demand)
Course Attribute(s): CoB: Social Science

ANTH 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

ANTH 470 - Field Work 2-4 hours. Supervised on-site field work on an approved topic. Prerequisites: ANTH 110, junior or senior standing, and permission of instructor.

ANTH 495 - Global Issues Seminar 4 hours. This integrative capstone course allows seniors to study a variety of global issues in-depth and to present the results of their own particular global experiences and studies. Topics examined will vary from year to year. The seminar may be focused on a central theme or on a variety of issues, depending upon the students' international interests and the instructor's discretion. Prerequisites: GLBS 101; Study Abroad; senior standing. (Cross-listed as GLBS 495 and SOCI 495)
Course Attribute(s): AU: Global Perspective, CoB: Social Science

Astronomy

ASTR 103 - Introductory Astronomy 4 hours. This course is a general survey of astronomy including our solar system, the nature of stars, the structure of galaxies, and cosmology, including the nature of Dark Matter and Dark Energy.
Course Attribute(s): CLAS: (F-II) Scientifc Knowldg, CLAS: (F2) Nat Sci-no Lab, CoB: Natural Science

ASTR 107 - Elementary Astronomy Lab 2 hours. Observation, supplemented by discussion of topics such as types of telescopes and auxiliary equipment, use of the Observatory, celestial coordinates and the use of reference materials, astronomical photography.
Course Attribute(s): CLAS: (F-I) Scientific Inquiry, CLAS: (F1) Nat Sci w/Lab, CoB: Natural Science

ASTR 200 - Special Topics in Astronomy 1-4 hours. Topics vary from year to year. (Sufficient demand)

ASTR 302 - Planetary Science 2 hours. A quantitative and comparative study of the planets, moons and small bodies of the Solar System, this course includes the physics of the interiors, surfaces, and atmospheres of the terrestrial planets/moons, and of the atmospheres and rings of the Jovian planets. Also includes the physics of planetary formation and the latest findings of probes currently exploring the Solar System. Prerequisite: One year of college level physics. (Sufficient demand)
Course Attribute(s): CoB: Natural Science

ASTR 303 - Stellar Astronomy 3 hours. Part of an astronomy sequence recommended for students in the physical sciences and area science teachers. Emphasis on the observational and theoretical basis for understanding stellar structure and evolution, beginning with the Sun. Prerequisite: One year of college level physics and MATH 151. (Sufficient demand)
Course Attribute(s): CoB: Natural Science

ASTR 304 - Galactic Astronomy and Cosmology 4 hours. Part of an astronomy sequence recommended for students in the physical sciences and area science teachers. Emphasis on the observational and theoretical basis of our knowledge of the Universe on the large scale. Topics include the structure of the Milky Way Galaxy, active and passive galaxies, and Cosmology. Prerequisite: One year of college level physics and MATH 151. (Sufficient demand)
Course Attribute(s): CoB: Natural Science

ASTR 307 - Observational Astronomy 2 hours. An introduction to astronomical observing techniques and data reduction. Emphasis placed on image acquisition and manipulation to determine things like the morphologies, distances, motions, and luminosities of various objects. This course is intended for students with interest in astronomy and some background in physics and mathematics. Prerequisite: One semester of college level physics; pre-or co-requisite: MATH 151. (Sufficient demand)
Course Attribute(s): CoB: Natural Science

ASTR 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

Athletic Training

ATHT 103 - Prevention and Care of Athletic Injuries 4 hours. An introduction to the athletic training profession, inflammation process, anatomy review, rehabilitation, recognition and prevention of common athletic injuries, taping, rehabilitation and evaluation skills in a laboratory portion, including fifty (50) clock hours of athletic training room observation, cleaning duties, and ACI assignments. A lab fee may be assessed.

ATHT 104 - Introduction to Clinical Experiences in AT 1 hour. 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. Prerequisites: ATHT 103 and ATHT 111.

ATHT 105 - Perspectives in the Health Professions 1 hour. This course introduces thealth professions and the resources available at Alfred University necessary for academic, personal, and professional accomplishment in the fields.

ATHT 110 - Medical Sciences 2 hours. This course provides a general overview of career opportunities in athletic training and other health/wellness related fields. Emphasis is placed on the domains of athletic training and application of them with regard to health and wellness in active populations.

ATHT 111 - Emergency Medicine in Athletic Training 3 hours. Basic level life support techniques including CPR, rescue breathing, and care of choking victim in conjunction with first aid techniques such as using a sling, splinting controlling bleeding and ambulation. Satisfies requirements for American Red Cross Professional Rescuer Certification.
Course Attribute(s): AU: Wellness (Fall '19)

ATHT 190 - Principles of Strength Training and Reconditioning 2 hours. This course is intended to cover the essentials of strength training and reconditioning to prepare a student who is interested in becoming a Certified Strength and Conditioning Specialist or a Certified Personal Trainer. One hour of lecture and two hours of physical activity each week.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Wellness (Fall '19)

ATHT 200 - Special Topics 1-4 hours. Topics of interest in Athletic Training are explored. Topics vary from term to term.

ATHT 201 - Clinical Experience in Athletic Training I 1 hour. 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. Prerequisites: Formal retention within ATEP, ATHT 103 and ATHT 111. A lab fee may be assessed.

ATHT 202 - Clinical Experience in Athletic Training II 1 hour. 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. Prerequisites: Formal retention within ATEP, ATHT 103 and 210. A lab fee may be assessed.

ATHT 205 - Structural Kinesiology 3 hours. This course focuses on the anatomical and mechanical components of human movement. An emphasis will be placed on the functional anatomy of the musculoskeletal and articular systems. Additional focus will be placed on examining the neuromuscular system and basic biomechanical principles associated with human movement.
Course Attribute(s): CoB: Natural Science

ATHT 210 - Advanced Athletic Training 3 hours. The study of specific concerns related to the field of athletic training in order to develop a thorough understanding of the etiology, pathology, treatment and management of athletic injuries and illnesses. Prerequisite: ATHT 103.

ATHT 215 - Personal Health and Wellness 2 hours. This course provides students with knowledge of current health problems including physical fitness, nutrition, and major diseases, and encourages application of this knowledge for healthful living.
Course Attribute(s): AU: Wellness (Fall '19)

ATHT 222 - Nutrition for Human Performance and Exercise 2 hours. This course focuses on human nutrition and metabolism, with particular emphasis on the implications of nutrition on human performance and physical activity.
Course Attribute(s): AU: Wellness (Fall '19), CLAS: (F-II) Scientifc Knowldg, CLAS: (F2) Nat Sci-no Lab, CoB: Natural Science

ATHT 232 - Introduction to Sports Management 3 hours. This course introduces the student to the sport management profession. Students are provided a comprehensive look at basic organizational structure found in the sport industry. Emphasis is placed on leadership, planning and policy development, program evaluation, legal and financial issues and other attributes required of a sport manager. Students also become acquainted with career opportunities in the sport management field.

ATHT 242 - Sports, Society, and Ethics 3 hours. In this course we investigate the social significance of sport and use the sociological perspective for understanding the nature of sport. We examine current and historical events, rules, laws and governing organizations. Topics include values, principles, racial and gender equity, coaching, commercialization, enhancing stimulants and ergogenic aids, eligibility, violence, sportsmanship and Code of Ethics in sports.

ATHT 265 - Integrative Therapeutic Applications I 3 hours. This course is designed to provide students with an introduction to the applications of therapeutic modalities integrated with appropriately applied therapeutic exercise techniques in professional practice for the prevention, care, and rehabilitation of athletic injuries. This course includes a one-hour per week laboratory component. Prerequisite: ATHT 210.

ATHT 276 - Integrative Therapeutic Applications II 3 hours. This course is designed to provide students with an advanced study of the applications of therapeutic modalities integrated with appropriately applied therapeutic exercise techniques in professional practice for the prevention, care, and rehabilitation of athletic injuries. This course includes a one-hour per week laboratory component. Prerequisite: ATHT 265.

ATHT 300 - Topics in Athletic Training 1-4 hours. Topics of interest in Athletic Training are explored. Topics vary from term to term.

ATHT 301 - Clinical Experience in Athletic Training III 1 hour. Practical experience supervised by a Certified Athletic Trainer in an athletic training environment at Alfred University. A minimum of 100 clock hours is required. Emphasis on clinical proficiencies of advanced taping and bracing techniques, medication record keeping, the asthmatic athlete, skin

conditions, and nutritional consideration, ACI assignment during sports season. Prerequisites: Formal retention within ATEP, ATHT 103 and 210. A lab fee may be assessed.

ATHT 302 - Clinical Experience in Athletic Training IV 1 hour. Practical experience supervised by an Approved Clinical Instructor (ACI)/Certified Athletic Trainer in an athletic training environment at Alfred University or affiliated site. A minimum of 150 clock hours is required. Emphasis on clinical proficiencies to advanced understanding of the etiology, pathology, treatment and management of athletic injuries and illnesses. Clinical assignment to ACI during season. Prerequisites: Formal retention within ATEP, ATHT 301. A lab fee may be assessed.

ATHT 310 - Orthopedic Procedures 2 hours. This course is designed to expose students to clinical examination, imaging, surgical interventions, as well as various other orthopedic procedures that are commonly seen in the allied health profession. Prerequisite: ATHT 103.

ATHT 320 - Psychosocial Strategies in Athletic Training 2 hours. This course is designed to provide a basic understanding of the psychology of (and strategies to help overcome issues within) sport, injury, and rehabilitation. Topics covered include emotion, motivation, mental skills training and use, psychological antecedents of injury, psychology of injury and rehabilitation, professional involvement, psychosocial-physiologic conditions, substance abuse and diversity. Prerequisite: PSYC 101.

ATHT 334 - Physical Evaluation of the Lower Extremity 3 hours. This course is designed to provide students with an intensive, thorough study of orthopedic evaluation techniques used within the clinical and on-field environments to assess athletic related injuries to the lower extremity sustained by physically active individuals. Normal joint kinematics and subsequent pathomechanics will also be discussed. This course includes a one-hour per week laboratory component. Prerequisites: Formal retention within ATEP and ATHT 210; or permission of instructor.

ATHT 341 - Evaluation of the Head, Neck, and Spine 2 hours. This course is designed to provide students with an intensive, thorough study of orthopedic evaluation techniques used within the clinical and on-field environments to assess athletic related injuries to the head, neck, or spine sustained by physically active individuals. Normal joint kinematics and subsequent pathomechanics are also be discussed. This course includes a one-hour per week laboratory component. Prerequisites: BIOL 207 and formal retention within the ATEP.

ATHT 348 - Physical Evaluation of the Upper Extremity 3 hours. This course is designed to provide students with an intensive, thorough study of orthopedic evaluation techniques used within the clinical and on-field environments to assess athletic related injuries to the upper extremity sustained by physically active individuals. Normal joint kinematics and subsequent pathomechanics will also be discussed. This course includes a one-hour per week laboratory component. Prerequisites: Formal retention within ATEP and ATHT 210; or permission of instructor.

ATHT 390 - Junior Seminar 1 hour. This course is designed to prepare the junior level athletic training student for the BOC examination and clinical internship experience. The course focuses on reviewing the various NATA consensus and position statements, emergency planning, therapeutic modalities and rehabilitation, as well as general injury pathology. Students are required to take the Junior Comprehensive Examination as a requirement of this course. Students must have junior-level standing in the Athletic Training Program.

ATHT 392 - Biomechanics 2 hours. The study of skeletal, joint, and muscular systems in the human body, including analysis of muscular-skeletal movement applied to exercise, sports, and dance-related skills. Emphasis will be placed on the principle of rigid body mechanics (statics and dynamics), Newton's Laws and how they govern human movement in sport and exercise. Prerequisite: Concurrent enrolment in ATHT 205.
Course Attribute(s): CoB: Natural Science

ATHT 393 - Physiology of Exercise 4 hours. The study of physiological changes in the body with exercise, sports, and dance activities. Emphasis on neuromuscular, cardiovascular, and respiratory systems, and their adaptations to training. Prerequisite: BIOL 208 or permission of instructor.
Course Attribute(s): CoB: Natural Science

ATHT 401 - Clinical Experience in Athletic Training V 1 hour. Practical experience supervised by a Certified Athletic Trainer in an athletic training environment at Alfred University. A minimum of 150 clock hours is required. Emphasis on clinical proficiencies of advanced assessment and management of injuries to the lower extremity, as well as therapeutic modalities. ACI assignment during sports season. Prerequisites: Formal retention within ATEP, ATHT 334 and 348. A lab fee may be assessed.

ATHT 403 - Medical Aspects of Athletic Training 1 hour. This is a course for senior athletic training students. It is designed to expose the athletic training student to the necessary recognition, evaluation and treatment skills needed to assess a variety of medical conditions affecting athletes and physically active individuals. Emphasis will be on developing clinical proficiencies of advanced assessment related to pathologies and disorders affecting the endocrine, exocrine, respiratory and autonomic nervous systems.

ATHT 420 - Pharmacology in Athletic Training 2 hours. This course is designed as an introduction to pharmacology. Pharmacodynamics, pharmacokinetics, drug interactions and reactions will be discussed. Extra attention will be given to drugs commonly used in sports medicine. This course is offered primarily for athletic training majors.

ATHT 432 - Organization and Administration of Athletics 2 hours. An in-depth study of administrative techniques including budgeting, personnel, and the use of computers in the athletic setting.

ATHT 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

ATHT 459 - Research Design in Athletic Training 2 hours. In this course students establish or advance their understanding of research through critical exploration of research language, ethics and approaches. The language of research is introduced, along

with ethical principles and challenges, and the elements of the process within quantitative, qualitative, and mixed methods approaches. Students use these theoretical underpinnings to begin to critically review literature relevant to athletic training, which allows students to formulate their own research proposal to the Human Subjects Review Committee.

ATHT 469 - Research Methods in Athletic Training II 1 hour. A continuation of ATHT 459, this course provides students an opportunity to either complete the research project that was submitted to the Alfred University Human Subjects Review Committee or to complete other in-class research. Prerequisite: ATHT 459.

ATHT 485 - Clinical Internship in Athletic Training 4 hours. Provides seniors with an opportunity for off-campus affiliated clinical experience related to the field of athletic training and sports medicine. Emphasis on the clinical proficiencies pertaining to administrative responsibilities. Practical experience supervised by a Certified Athletic Trainer. A minimum of 200 clock hours is required. Prerequisite: Concurrent enrollment in ATHT 495.

ATHT 490 - Senior Seminar in Athletic Training 1 hour. Capstone educational course focusing on preparing the athletic training student for the BOC exam, graduate school/job applications, and career development issues. Review of athletic training domains, exam simulations, mock interviews, and practical application of skills will be emphasized. Prerequisite: ATHT 301, ATHT 302.

ATHT 495 - Current Topics in Athletic Training 2 hours. This course is designed to serve as a culmination of the athletic training curriculum. This capstone course addresses current prevention, assessment, and rehabilitation of the most common conditions found in an athletic training work environment. Pharmacological and professional development topics will also be addressed. Additional material will be presented pertaining to the contemporary issues affecting the current state of the athletic training profession. Prerequisite: ATHT 432.

Biology

BIOL 101 - General Biology I 4 hours. This course is an introduction to the fundamentals of biological organization at the cellular level. Topics include the chemical basis of life, cell structure and function, and genetics. Three lecture/discussions and one two-hour laboratory. This course is offered as a dual credit course at Wellsville High School.
Course Attribute(s): CLAS: (F-I) Scientific Inquiry, CLAS: (F1) Nat Sci w/Lab, CoB: Natural Science

BIOL 102 - General Biology II 4 hours. A continuation of BIOL 101, this course is an introduction to the fundamentals of biological organization and processes with an emphasis on diversity of organisms, the variety of ways they have adapted to meet the requirements for living, and how they interact with their environment and other organisms. Three lecture/discussions and one two-hour laboratory. This course is offered as a dual credit course at Wellsville High School.
Course Attribute(s): CLAS: (F-I) Scientific Inquiry, CLAS: (F1) Nat Sci w/Lab, CoB: Natural Science

BIOL 105 - Science of Nutrition 4 hours. By looking at the science behind nutrition, we answer the questions "Are we really what we eat? And how do we know what is in our food?" Incorporating basic biology, chemistry, and physics, we investigate the components of food, consider how these are processed by the body, and the importance of nutrition to growth, health, and disease.
Course Attribute(s): AU: Wellness (Fall '19), CLAS: (F-I) Scientific Inquiry, CLAS: (F2) Nat Sci-no Lab, CoB: Natural Science

BIOL 106 - Field Botany 4 hours. Introduction to the taxonomy and adaptations of native and introduced plants in western New York ecosystems. Students will learn identification of species through laboratory and field studies. Biodiversity of natural ecosystems will be investigated and compared. Biology majors may receive Biology elective credit by fulfilling additional requirements.
Course Attribute(s): CLAS: (F-I) Scientific Inquiry, CLAS: (F1) Nat Sci w/Lab, CoB: Natural Science

BIOL 107 - Human Anatomy and Physiology I 4 hours. This course examines the bases of the human body in health and disease. Dissection of the cat and other mammalian organs, and a series of physiology exercises investigate structure and function from cell to organ system of the integumentary, skeleto-muscular, nervous-sensory and endocrine systems. Three lecture/discussions and one three-hour laboratory. This course is offered as part of the BOCES New Visions Medical program.
Course Attribute(s): CLAS: (F-I) Scientific Inquiry, CLAS: (F1) Nat Sci w/Lab, CoB: Natural Science

BIOL 108 - Human Anatomy and Physiology II 4 hours. A continuation of Biology 107 with a focus on the 'internal' organ systems, including the circulatory, lymphatic, respiratory, digestive, urinary and reproductive. Three lecture/discussions and one three-hour laboratory. This course is offered as part of the BOCES New Visions Medical program.
Course Attribute(s): CLAS: (F-I) Scientific Inquiry, CLAS: (F1) Nat Sci w/Lab, CoB: Natural Science

BIOL 119 - Physiology of Aging 4 hours. Examines both the expected changes in normal human aging as well as the pathologies of the aging process. Topics covered include digestive, cardiovascular, sensory, hormonal, musculoskeletal and urogenital systems as well as cellular metabolism and drug absorption. Required of Gerontology majors. Four lectures. (Alternate years)
Course Attribute(s): AU: Service Learning Courses, CLAS: (F-II) Scientifc Knowldg, CLAS: (F2) Nat Sci-no Lab, CoB: Natural Science

BIOL 120 - Gut Instinct: An Introduction to Microbes 4 hours. This course will introduce you to the hidden microbial world, with an emphasis on bacteria and viruses and the relationship they have with humans.The following topics are covered: microbial structure, physiology, ecology, metabolism, infectious disease, food microbiology, and gut-microbe interactions that affect human health. (Offered: Summer Term/Allen Term)
Course Attribute(s): CLAS: (F-III) Science/Society, CoB: Natural Science

BIOL 130 - Introduction to Human Genetics 4 hours. A look at human genetics from the human genome project and biotechnology to inheritance of traits. Emphasis will be placed on understanding current and past discoveries in genetics, how those discoveries may impact our lives, and what they mean for

the non-scientist. Class will meet for 3 lectures and one two-hour lab per week.
Course Attribute(s): CLAS: (F-III) Science/Society, CLAS: (F1) Nat Sci w/Lab, CoB: Natural Science

BIOL 131 - The Basics of Cancer Biology 4 hours. This course is designed for a broad spectrum of students from different academic backgrounds and interests, who would like to learn more about cancer, its biology, mechanisms of action, therapeutics, ethical aspects of chemotherapeutics treatments and alternative approaches to malignances. Students learn how to communicate scientific basics of cancer etiology to society and their community members in an approachable language.
Course Attribute(s): CLAS: (F-II) Scientifc Knowldg, CLAS: (F2) Nat Sci-no Lab, CoB: Natural Science

BIOL 150 - Biological Foundations 4 hours. This course introduces both biology majors and non-majors to the core concepts of biological literacy (evolution, structure and function, genetics and information flow, metabolism and energy, and living systems) and the competencies that underlie the disciplinary practice of Biology.
Course Attribute(s): CLAS: (F-I) Scientific Inquiry, CLAS: (F2) Nat Sci-no Lab, CoB: Natural Science

BIOL 155 - Biological Foundations: Antibiotic Discovery 4 hours. This course is designed for entering biology majors who have had a strong biology course prior to matriculation at Alfred, and who thrive in a non-traditional course environment. In addition to a solid foundation in Biological core concepts, students participate in a hands-on research project in antibiotic discovery, and contribute findings to an international database. Registration is by permission. Contact the chair of the Biology Division if you are interested in applying for enrollment in this course.
Course Attribute(s): CLAS: (F-I) Scientific Inquiry, CLAS: (F1) Nat Sci w/Lab, CoB: Natural Science

BIOL 207 - Introduction to Anatomy and Physiology I 4 hours. Introduction to the structure and function of the human body focusing on general biology, chemistry, and physics by exploring the integumentary, skeletal, muscular, and nervous systems. (This course meets NYSED certification knowledge in scientific concepts). Three lectures and a laboratory.
Course Attribute(s): CLAS: (F-II) Scientifc Knowldg, CLAS: (F2) Nat Sci-no Lab, CoB: Natural Science

BIOL 208 - Introduction to Anatomy and Physiology II 4 hours. Introduction to the structure and function of the human body focusing on the cardiovascular, respiratory, digestive, lymphatic, and reproductive systems, with special attention given to nutrition. Three lectures and a laboratory. Prerequisite: BIOL 207 or instructor permission.
Course Attribute(s): CoB: Natural Science

BIOL 211 - Cell Biology 4 hours. The first course in a core sequence for biology majors, this course focuses on the molecular foundations of life, enzymology, metabolism, and cell ultrastructure, organization and function. Laboratory focuses on basic techniques including microscopy, micropipetting and the use of model organisms. C or better in BIOL 150 and in CHEM 105, CHEM 106 is recommended as a pre- or co-requisite.

BIOL 212 - Principles of Genetics 4 hours. Students who complete this course will have a fundamental knowledge of the principles of transmission, molecular and population genetics. Application of concepts through investigative laboratories. A required core course for biology majors. Three lectures and one three-hour laboratory per week. Prerequisite: 'C' or better in BIOL 211 and CHEM 106.

BIOL 213 - Structure and Function of Organisms 4 hours. Using one or more model systems (e.g. humans, plants), students will be able to explain structure-function relationships; how form follows function in animals and plants. Application of concepts through investigative laboratories. A required core course for biology majors. Three lectures and one two-hour laboratory per week. Prerequisite: 'C' or better in BIOL 211.

BIOL 226 - Biostatistics 4 hours. Application of statistics to experimental design, data analysis, and decision making in the biological sciences. Prerequisite: BIOL 211 as Pre- or Co-requisite.
Course Attribute(s): CLAS: (03) Quant Reasoning

BIOL 300 - Topics in Biology 1-4 hours. This course provides opportunities for examining areas not covered in the regular offerings. Topics vary each semester.

BIOL 302 - General Microbiology 4 hours. This course surveys the microbial world, with an emphasis on bacteria and viruses. The student will gain an understanding of how the study of microorganisms has paved the way for important advances in human health, agriculture, and food science. Major topic areas include structure/function, metabolism, genetics, biotechnology, and host-parasite relationships. The laboratory offers experience in aseptic handling of bacterial cultures as well as applications of classical and modern techniques for microbial identification and characterization. Three lectures and one three-hour laboratory. Prerequisites: BIOL 211 and (CHEM 310 or 315).

BIOL 307 - Anatomy and Physiology: Nerves, Muscles, Skeleton 4 hours. This course examines the bases of the human body in health and disease. Using dissections of mammalian specimens, students investigate structure and function from cell to organ system of the integument, skeletal-muscular, and nervous-sensory systems. Three lectures and one two-hour laboratory per week. This course is part of the Anatomy and Physiology series. Prerequisite: BIOL 211.

BIOL 308 - Anatomy and Physiology: Viscera 4 hours. This course examines the bases of the human body in health and disease with a focus on 'internal' organ systems, including the circulatory, lymphatic, respiratory, urinary, and reproductive systems. Students engage in dissections of mammalian specimens. Three lectures and one two-hour laboratory per week. This course is part of the Anatomy and Physiology series. Prerequisite: BIOL 307.

BIOL 314 - Community and Systems Biology 4 hours. Living systems are interconnected and interacting. Living organisms must be able to perceive and respond to changes in their diverse and dynamic environments. Therefore, we consider biological systems at multiple functional scales to fully understand how organisms and their environments interact with and modify each other. Prerequisite: 'C' or better in BIOL 212 and BIOL 213.

BIOL 315 - Genetics and Evolution of Populations 4 hours. This course investigates modern evolutionary theory at the macro- and micro-evolutionary scale. Topics include historical

perspectives, basic principles of evolution, mechanisms of evolution, genetics of populations, quantitative genetics and phylogenetics. Four hours of lecture per week. Prerequisite: BIOL 212; BIOL 213 recommended.

BIOL 322 - Botany 4 hours. A phylogenetic exploration of plants, with emphasis on adaptation of structure and function to different environments. Topics include anatomy, physiology, evolution, ecology, and economic botany. Three lectures and one two-hour laboratory period. Prerequisite: BIOL 150 (or equivalent) or BIOL 211 or ENVS 101.

BIOL 346 - Animal Nutrition 4 hours. Basic principles of animal nutrition, emphasizing characteristics and metabolism of nutrients, these nutrients in terms of feedstuffs, anatomy and physiology of gastrointestinal tracts, and nutritional lifecycles of various animals. Four lectures. Prerequisite: BIOL 211.

BIOL 348 - Animal Behavior 4 hours. A look at the study of animal behavior to interpret genetic, environmental, and physiological influences on development, control, adaptation and evolution of behavior. 4 lectures. Prerequisites: BIOL 211 and BIOL 226.

BIOL 354 - Ecology 4 hours. Interactions of organisms and their environment with emphasis on populations, communities, and ecosystems. Three lectures and one three-hour laboratory. Prerequisite: BIOL 150 or 201 or ENVS 101. (Fall, alternate years)

BIOL 357 - Conservation Biology 4 hours. This course focuses on the biology that underlies our efforts to conserve genetic, species, and community diversity and the community/ecosystem/landscape dynamics that sustain them. We will review concepts of genetics, population biology, and landscape ecology to understand threats to populations and species and the techniques used to sustain them. Prerequisite: BIOL 150 or ENVS 101. (Cross-listed as ENVS 357)

BIOL 358 - Biogeography 4 hours. Biogeography looks at patterns of living things in space and time. By combining ecological, evolutionary, and geographic points of view, we will see how life has evolved around the globe to exploit physical differences such as soils and climate. Landscape ecology quantifies spatial structure, especially as affected by humans, in regions comprising one or more ecosystems. Relating the two approaches helps us to appreciate how populations have survived geographical constraints in the past and to predict how they might fare in the future. Geographic information systems will be demonstrated as an important contemporary tool in spatial ecology. Prerequisites: BIOL 226 and (BIOL 213 or 354).

BIOL 375 - Comparative Vertebrate Anatomy 4 hours. A comprehensive review of the structure, taxonomy, evolution, and biological relationships of vertebrates. Two lectures and two two-hour laboratories. Prerequisites: BIOL 211. (Alternate years)

BIOL 376 - Animal Physiology 4 hours. Principles and problems concerned with the physiochemical responses and functioning of animal tissues and organs. Three lectures and one three-hour laboratory period. Prerequisite: BIOL 375.

BIOL 390 - Junior Seminar 1 hour. Development of writing and interviewing skills critical in applying to graduate and professional schools, internships, and for employment. Students write and critique cover letters, resumes, essays and sample applications, take sample entrance examinations, interview a professional in a career of interest, and receive phone and face-to-face mock interviews with feedback on appropriate dress, mannerisms, and ability to respond to questions. Emphasis on professionalism. Prerequisite: BIOL 211 as Pre- or Co-requisite.

BIOL 400 - Research Topics 4-5 hours. Offerings are research-intensive courses that vary from year to year.

BIOL 402 - Immunology 4 hours. In this course students learn what makes up the immune system, and how it works in keeping us healthy. We'll also look at some of the more complex issues surrounding the immune system such as vaccination, autoimmune disease and transplantation. Upon completion of the course students will be able to name and describe the cells and organs of the immune system and understand the function of each. Students will also be able to describe the normal processes of immunity and regulatory controls, explain the results of immune component deficiencies and understand how normal immune function can cause disease. Prerequisite: BIOL 211 or 362; BIOL 302 recommended.

BIOL 405 - Bioinformatics 4 hours. This course emphasizes the hands-on application of bioinformatics methods in the context of a collaborative genomic annotation project. Students will gain experience in the application of existing software, as well as in combining approaches to answer specific biological questions. Prerequisite: BIOL 211; a statistics course is recommended. (Offered Fall, even years)

BIOL 420 - Biochemistry: Proteins and Metabolism 4 hours. Properties, biosynthetic pathways, and metabolism of carbohydrates, lipids, and nitrogenous compounds with related units on physical biochemistry, protein structure, bioenergetics and enzyme kinetics. Laboratories reinforce theoretical concepts and provide hands-on experience with modern biochemistry techniques and instrumentation. Three lectures and one three-hour laboratory. Prerequisites: Either [BIOL 211 and CHEM 316] or [(BIOL 211) and (CHEM 343 or CEMS 235), and (CHEM 310 or CHEM 315)]. (Cross-listed as CHEM 420) **Course Attribute(s):** CoB: Natural Science

BIOL 425 - Physiological Plant Ecology 4 hours. An exploration of plant function from the tissue to the whole organism level, with emphasis on interactions with the environment. Topics include plant-water relations, nutrition, energy and carbon cycling, development, and stress physiology. Three lectures and one three-hour laboratory. Prerequisites: BIOL 213, BIOL 226, and (CHEM 310 or 315). (Alternate years)

BIOL 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required. Independent Study is required of all students who are candidates for graduation with honors in Biology.

BIOL 485 - Internship in Biology 1-6 hours. Off-campus research in consultation with faculty and project advisors. Open to junior, senior and graduate biology students.

BIOL 490 - Senior Seminar 1 hour. An advanced topics seminar held once a week, conducted by enrolled students, local speakers, and outside speakers. Weekly topics and discussion

will represent current research in a wide range of biological sciences. Prerequisite: Biology major with senior standing. (Offered Spring, every year)

Biopsychology
BIPY 485 – Practicum or Internship 1-4 hours.
BIPY 499 – Thesis 1-4 hours.

Chemistry
CHEM 105 - General Chemistry I 4 hours. A systematic study of the fundamental principles, theories and calculations involved in chemistry. Basic concepts of bonding, chemistry of selected elements and their compounds, states of matter, stoichiometry, solution reactions, equilibrium, kinetics, electrochemistry, thermodynamics, nuclear chemistry, and an introduction to organic chemistry. Laboratory work includes experiments in stoichiometry, qualitative and quantitative analysis. Required for pre-health professionals and engineering, biology, and chemistry majors. Two lectures, one demonstration, one laboratory and one quiz per week.
Course Attribute(s): CLAS: (F-I) Scientific Inquiry, CLAS: (F1) Nat Sci w/Lab, CoB: Natural Science

CHEM 106 - General Chemistry II 4 hours. CHEM 106 is a continuation of CHEM 105. Two lectures, one demonstration, one laboratory and one quiz per week. Prerequisite: CHEM 105 or CHEM 115.
Course Attribute(s): CLAS: (F-I) Scientific Inquiry, CLAS: (F1) Nat Sci w/Lab, CoB: Natural Science

CHEM 200 - Special Topics in Chemistry 1-4 hours.

CHEM 300 - Special Topics in Chemistry 1-4 hours. This course explores special topics in chemistry appropriate for sophomore, junior, and senior level students majoring in chemistry or related fields. Contact the course instructor for additional information about any CHEM 300 course offering. Prerequisites: CHEM 105 and CHEM 106, or permission of instructor.

CHEM 310 - Basic Organic Chemistry 3 hours. A descriptive study of the structure and reactions of common aliphatic and aromatic compounds of carbon. For students interested in ceramics, materials science, environmental science, or ecology, but not suitable for chemistry majors or those interested in biochemistry, molecular biology, or the health professions. Prerequisite: CHEM 106 or CHEM 116 or permission of instructor.
Course Attribute(s): CoB: Natural Science

CHEM 315 - Organic Chemistry I 4 hours. An introduction to organic compounds. Topics include structure identification using modern spectroscopic methods, bonding and reactions such as nucleophilic substitutions, eliminations and additions to alkenes. Laboratory topics include extraction/washing, recrystallization, TLC, melting points and distillation. Prerequisite: CHEM 105 and 106.
Course Attribute(s): CoB: Natural Science

CHEM 316 - Organic Chemistry II 4 hours. An in-depth exploration of the chemistry of carbon-based compounds. Topics include enolates, reductions, oxidations, additions to the carbonyl, the Diels-Alder reaction, radicals Aromatic reactions, aromaticity, carbohydrates and amino acid chemistry. Laboratory topics include instrumentation and varying reactions. Prerequisite: CHEM 315.
Course Attribute(s): CoB: Natural Science

CHEM 321 - Introduction to Analytical Chemistry 4 hours. A study of classical analytical techniques involving equilibria of aqueous systems as well as simple modern analytical techniques involving the methods and instrumentation of spectrophotometry and separation science will be presented. Laboratory exercises will include inorganic synthesis, "traditional wet methods of analysis," and instrumental methods of analysis. Two lectures and two three-hour laboratories per week. Prerequisite: CHEM 106 or CHEM 116.
Course Attribute(s): CoB: Natural Science

CHEM 343 - Physical Chemistry I 4 hours. The first semester of our physical chemistry sequence covers thermodynamics from a combined classical/statistical perspective and chemical kinetics. Pre-requisite: CHEM 106, MATH 152, and PHYS 112 or 126.
Course Attribute(s): CoB: Natural Science

CHEM 345 - Physical Chemistry Laboratory 1 hour. 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.
Course Attribute(s): CoB: Natural Science

CHEM 346 - Physical Chemistry II 3 hours. The second semester of our physical chemistry sequence covers quantum mechanics and spectroscopy. Prerequisite: CHEM 343 or CEMS 235.
Course Attribute(s): CoB: Natural Science

CHEM 370 - Chemistry Projects 1 or 2 hours. Laboratory work or literature review involving a chemical topic of interest to the student and not covered in any of the regular course work. A final written report is required. CHEM 370 cannot be substituted for any of the required courses in the chemistry major and cannot be used to fulfill the additional credits needed for an ACS certified degree. A chemistry minor may count up to three credits of CHEM 370 toward the minor. Laboratory work that can be considered original research in chemistry should be performed as an Independent Study or an ARGUS project (CHEM 450). Prerequisites: Permission of instructor, a study plan approved by the Division Chair, and CHEM 106.

CHEM 372 - Inorganic Chemistry 3 hours. Principles of inorganic chemistry with emphasis on periodicity, symmetry and group theory, molecular orbital theory, bonding, acid/base chemistry, coordination chemistry, organometallic compounds, and catalysis. Prerequisite: CHEM 343 or CES 235.
Course Attribute(s): CoB: Natural Science

CHEM 374 - Inorganic Chemistry Laboratory 1 hour. Eight to ten experiments designed to demonstrate the synthetic techniques used in modern inorganic chemistry. Inert atmosphere techniques will be included. Co-requisite: CHEM 372.
Course Attribute(s): CoB: Natural Science

CHEM 400 - Advanced Chemistry Topics 1-4 hours. Special topics not covered by regular course work. All special topics courses must have the written approval of the Division Chair and should in general meet the criteria of the American Chemical Society's requirements for an advanced course. Prerequisite: CHEM 346, although this can be waived at the discretion of the Division Chair.
Course Attribute(s): CoB: Natural Science

CHEM 420 - Biochemistry: Proteins and Metabolism 4 hours. Properties, biosynthetic pathways, and metabolism of carbohydrates, lipids, and nitrogenous compounds with related units on physical biochemistry, protein structure, bioenergetics and enzyme kinetics. Laboratories reinforce theoretical concepts and provide hands-on experience with modern biochemistry techniques and instrumentation. Three lectures and one three-hour laboratory. Prerequisites: Either [BIOL 211 and CHEM 316] or [(BIOL 211) and (CHEM 343 or CEMS 235), and (CHEM 310 or CHEM 315)]. (Cross-listed as BIOL 420)
Course Attribute(s): CoB: Natural Science

CHEM 423 - Instrumental Analysis 3 hours. The theory and practice of modern instrumentation techniques and methods used in chemistry are presented. An in-depth look at spectroscopic, separation, and electrochemical methods and their associated instrumentation follow an introduction to instrumentation; interpretation of results is also covered. Required for chemistry majors. Prerequisites: CHEM 321 and CHEM 346 or equivalent.
Course Attribute(s): CoB: Natural Science

CHEM 450 - Independent Study 1-4 hours. Original chemical research under faculty guidance. The work must have the potential to be published. An Approved Plan of Study and a written final report are required. Oral reports may also be required.

CHEM 461 - Advanced Chemistry Laboratory I 2 hours. A laboratory course integrating synthesis, purification, analysis, and characterization of chemical species. Synthetic work includes use of controlled atmospheres, high temperatures and non-aqueous systems. Purification of compounds is by distillation and recrystallization, as well as by various chromatographic techniques. Analysis and characterization include both wet chemical and instrumental techniques. Co-requisite: CHEM 423. Prerequisites: CHEM 321 and CHEM 346 or equivalent.
Course Attribute(s): CoB: Natural Science

CHEM 485 - Internship in Chemistry 2-6 hours. Off-campus research in consultation with faculty and an off campus project advisor. An approved plan of study and a written final report are required. Oral reports may also be required. The work must represent original research in chemistry and have the potential to be published. Open to juniors and seniors. 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.

CHEM 490 - Chemistry Seminar 0 hours. The Chemistry Seminar is a three semester advanced topics course with a varied format ranging from outside speakers to development of skills such as literature searches, resumes, poster presentations and oral presentations.
Course Attribute(s): CoB: Natural Science

Chinese
CHIN 101 - Chinese I 4 hours. This course is an introduction to the Mandarin Chinese language and cultures of the People's Republic of China.
Course Attribute(s): CLAS: (02) Foreign Language, CoB: Humanities

CHIN 102 - Chinese II 4 hours. The further development of basic language skills introduced in CHIN 101. A continuation of the study of the cultures of the People's Republic of China. Prerequisite: CHIN 101 or permission of the instructor.
Course Attribute(s): CLAS: (02) Foreign Language, CoB: Humanities

CHIN 200 - Special Topics 1-4 hours. Content varies. Prerequisite: CHIN 102 or permission of instructor.

CHIN 201 - Chinese III 4 hours. In this course students continue development of Chinese language skills, with attention to listening, speaking, reading and writing Mandarin. Students become more familiar with Chinese characters and gain a deeper understanding of China, its people and cultures. Prerequisite: CHIN 102 or permission of instructor.
Course Attribute(s): CLAS: (02) Foreign Language, CoB: Humanities

CHIN 202 - Chinese IV 4 hours. This course is the next phase for students who have completed CHIN 201. It continues in the strengthening of students' knowledge of and proficiency in Chinese. It enhances students' oral expression, reading comprehension, and cultural understanding. Prerequisite: CHIN 201.
Course Attribute(s): CLAS: (02) Foreign Language, CoB: Humanities

CHIN 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

Liberal Arts and Sciences
CLAS 100 - Special Topics in Liberal Arts and Sciences 1-4 hours. Opportunities are provided for the examination of interdisciplinary topics not normally justified as regular offerings. Topics vary from year to year.

CLAS 101 - Transfer Seminar 1 hour. As the cornerstone of the College of Liberal Arts and Scinces 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.

Coaching
COAC 291 - Philosophy, Principles and Organization of Athletics in Education 3 hours. This course covers basic philosophy and principles as integral parts of physical education and general education; State, local and national regulations and policies related to athletics; legal considerations; function and organization of leagues and athletic associations in New York State; personal standards for the responsibilities of the coach as

an educational leader; public relations; general safety procedures; general principles of school budgets; records; purchasing; and use of facilities.

COAC 301 - Health Sciences Applied to Coaching 3 hours. This course is a series of interactive exercises and activities designed to help students gain information about health sciences and coaching, organize it, and apply it to their particular programs. The course helps to define selected principles of biology, anatomy, physiology, and kinesiology related to coaching.

COAC 475 - Theories and Techniques of Coaching Sports 2 hours. This course begins with a discussion of the basic concepts common to all sports. Topics include a history of interscholastic athletics in New York State and the objectives, rules, regulations and polices of athletics. An internship that includes practical experience as a coach in a specific sport and/or periods of observing other coaches is required. Prerequisite: COAC 291; Pre- or co-requisite: COAC 301.

COAC 485 - Coaching Sports Internship 1 hour. This internship is for students who wish to gain certification to coach in a second sport.

Communication Studies

COMM 100 - Topics in Communication 1-4 hours. This course provides opportunities for examining communication studies areas not covered in the regular offerings. Topics vary each semester.

COMM 101 - Introduction to Communication Studies 4 hours. An introduction to communication studies in a variety of contexts: intrapersonal, interpersonal, small group, and public. The class improves the student's understanding of communication as a process and facilitates day-to-day interactions.
Course Attribute(s): CoB: Social Science

COMM 110 - Mass Media and American Life 4 hours. An examination of the evolution of American mass media and their cultural, economic, and social implications. Students analyze varied media vehicles (including newspapers, books, magazines, sound recordings, films, and television programs) with regard to content, form, and demographic impact.
Course Attribute(s): CoB: Social Science, SoAD: Humanities-'Other'

COMM 200 - Special Topics in Communication 1-4 hours. This course provides opportunities for examining communication studies areas not covered in the regular offerings. Topics vary each semester.
Course Attribute(s): CoB: Social Science

COMM 205 - Introductory Newswriting and Reporting 4 hours. An introductory journalism course emphasizing news gathering and reporting a variety of basic news stories, including hard news, features, and enterprise stories. Basic newswriting skills covered, including developing news judgment, style, structure, sources, and interviewing techniques.
Course Attribute(s): CoB: Humanities

COMM 210 - Interpersonal Communication 4 hours. This course is designed to increase students' awareness of interpersonal communication theories, practices, and impact.
Course Attribute(s): CoB: Social Science

COMM 215 - Introduction to Film Studies 4 hours. Learn how to "read" a film, rather than simply "watch" a film. This course is an examination of fundamental film techniques and basic methods of film analysis. Students engage with core concepts like genre, cinematography, directors, star culture, documentaries, special effects, and cinema's place in the 21st century. (Offered Fall, every year)
Course Attribute(s): CLAS: (C) The Arts

COMM 216 - Video Production 4 hours. This course offers an introduction to basic video production techniques and processes allowing for the creation of group-based projects. The main focus of the course is practical, affording students an opportunity inside and outside of class to produce dramatic and non-fiction original works. (Offered on demand)
Course Attribute(s): CLAS: (C) The Arts

COMM 220 - Understanding Popular Culture and Media 4 hours. We often refer to popular entertainment as escapist without fully considering what we are escaping from, where we are escaping to, or in what ways the experience affects us. This class ponders these topics through an introduction to the core concepts and approaches associated with critical/cultural studies.
Course Attribute(s): CLAS: (C) The Arts, CoB: Social Science, SoAD: Humanities-'Other'

COMM 221 - Pop Culture Goes Global 4 hours. This course examines U.S. popular culture and the media and their sociological, economic and political influence on cultures at home and abroad. It offers students a deeper understanding of globalization and its effect on their lives. (Every year; Fall) (Cross-listed as GLBS 221)
Course Attribute(s): AU: Global Perspective, CoB: Social Science

COMM 237 - Media and Politics 4 hours. This course examines the relationship between mass media and politics. We will explore the ways in which mass communications media shape the politics of elections, daily governance, U.S. foreign policy, interest groups, social movements, and identity. (Cross-listed as POLS 237, SOCI 237)
Course Attribute(s): CoB: Social Science

COMM 300 - Special Topics 1-4 hours. This course provides opportunities for examining communication studies areas not covered in the regular offerings. Topics vary each semester.
Course Attribute(s): CoB: Social Science

COMM 301 - Broadcasters, Advertisers, and Audiences 4 hours. An overview of television and radio broadcasting and advertising in the United States. The course examines how a variety of factors--historical, cultural, political, legal, economic, and technological--affect the content and character of American broadcasting.
Course Attribute(s): CoB: Social Science

COMM 302 - Public Relations Principles 4 hours. Public relations is the values-driven management of relationships with groups of people that can influence an organization's success. This course examines how organizations can ethically and systematically build productive, mutually beneficial relationships with such groups. To accomplish this, we discuss: (1) the historical antecedents and contemporary practice of

public relations in America; (2) the day-to-day tasks and communication responsibilities of public relations practitioners; and (3) the various challenges PR practitioners encounter in their careers. No prerequisite; COMM 205 recommended.
Course Attribute(s): AU: Service Learning Courses, CoB: Social Science

COMM 304 - History of the Motion Picture 4 hours. This film history course presents a chronological survey of the motion picture industry. The course focuses on cinema's origins and its major developments by examining historical periods, movements and genres in the American studio system and on the global stage. (Offered on demand)
Course Attribute(s): CLAS: (C) The Arts

COMM 309 - Persuasion: Reception and Responsibility 4 hours. This course provides majors in communication studies and related areas with a foundation for rhetorical thinking. Critical issues in persuasion are addressed, along with a historical survey of rhetorical philosophy and theory. Students successfully completing the course will know expert opinions on issues concerning persuasive communication.
Course Attribute(s): CoB: Social Science

COMM 315 - Understanding Global Media and Cultural Change 4 hours. In this course students analyze global media (news and entertainment) in order to better understand how global media messages influence societies and audiences worldwide. Students also develop an understanding of how to create their own objective and persuasive global media messages. (Cross-listed as GLBS 315) (Every other year; Spring)
Course Attribute(s): AU: Global Perspective, CoB: Social Science

COMM 325 - Global Communication 4 hours. Global Communication introduces students to communication and media issues impacting the global community in the digital age, including: international telecommunication networks, transnational media corporations (based in America, Asia, the Middle East, etc.), global news, global advertising, the Internet and information flow. Prerequisite: COMM 110 or permission of instructor. (Cross-listed as GLBS 325)
Course Attribute(s): AU: Global Perspective, CoB: Social Science

COMM 400 - Special Topics 1-4 hours. This course provides opportunities for examining communication studies areas not covered in the regular offerings. Topics vary each semester.
Course Attribute(s): CoB: Social Science

COMM 401 - Technology and Communication 4 hours. In this course we explore historical and contemporary questions raised by the introduction of new communication technologies with particular emphasis on the social, economic, and aesthetic impact of these emerging technologies. We examine how emerging technologies configure and drive globalization, capitalism, and democracy itself. Prerequisite: junior/senior standing, or permission of instructor.
Course Attribute(s): CoB: Social Science

COMM 409 - Organizational Communication 4 hours. This course introduces students to major concepts regarding communication in organizations, including the professional environment.
Course Attribute(s): CoB: Social Science

COMM 410 - Communication Ethics 4 hours. An exploration of ethical perspectives that pertain to communication in a variety of contexts, including interpersonal, small group, organizational, public and mass. Students learn to become more responsible senders and receivers of communication. Prerequisites: COMM 101 and COMM 110.
Course Attribute(s): CoB: Social Science

COMM 412 - Gender and American Film 4 hours. This course is an overview of how mainstream, artistically and/or popularly successful Hollywood films reflect gender images expressed in stereotypes, power relationships, and sexuality. The class examines gender as a social construct. The goal is to amass a working knowledge of the theories associated with gender and film criticism as well as to determine how students have been influenced by these cinematic representations. (Cross-listed as WGST 412)
Course Attribute(s): CoB: Humanities

COMM 426 - Screenwriting 4 hours. This course is an advanced writing workshop that concentrates on the principles and techniques of industry standard three act screenplays. Prerequisite: COMM 205 or ENGL 102, or permission of instructor.

COMM 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

COMM 451 - Publishing Practicum 4 hours. Students work through all aspects of the process to publish an edition of an out-of-copyright text: conducting market research, selecting and editing the primary text, researching and writing an introduction, creating appropriate timelines and appendices, laying out the book using InDesign, designing the cover, procuring ISBN and Library of Congress numbers, submitting the text to the printer, and publishing the book using a print-on-demand model. Prerequisite: ENGL 102. (Cross-listed as ENGL 451)

COMM 465 - Gender, Race, Class and Media 4 hours. This course investigates how women and minorities (including sexual minorities) are covered/portrayed by the news and entertainment media and how underlying economic, political and sociological factors affect such coverage. It explores how media portrayals influence the public's views regarding women and minorities and how women and minorities view themselves. And it examines critics' charges that the media portray women and minorities in a negative light and strategies used to counteract possible resulting harm. Prerequisite: COMM 110 or permission of instructor. (Cross-listed as SJST 465, WGST 465)
Course Attribute(s): CoB: Social Science

COMM 475 - Specialized Reporting 4 hours. A workshop course in which students select and pursue an area of interest. Students, working in a simulated newsroom environment, will cover beats ranging from the courts to the Arts. Emphasis on developing quality beat coverage. Prerequisite: COMM 205 or permission of instructor.

COMM 485 - Internship in Communication 1-4 hours. This course entails a workplace experience that extends what is learned within the Communication Studies curriculum. Interns report to their COMM advisor and a counselor from the Career Development Center throughout the process. Interested COMM

majors and minors should consult with their advisor for additional information prior to enrolling in this course. Maybe be repeated up to a total of 8 earned credit hours. Prerequisite: COMM 101 and permission of instructor.

Criminal Justice Studies

CRIM 300 - Special Topics 1-4 hours. An open course varying in contents from year to year, which allows concentration on special topics.

CRIM 322 - Juvenile Justice 2 hours. This course provides an overview of the treatment of the youthful offender in the juvenile justice system. Philosophies guiding the state's treatment of rule-breaking young people are examined. Experiences with law enforcement and the courts are emphasized. Prerequisite: SOCI 245.
Course Attribute(s): CoB: Social Science

CRIM 332 - Focusing on Police 2 hours. This course gives students an in-depth analysis of police operations. Discussions are centered on police operations and the social process involved in police-citizen contacts. Prerequisite: SOCI 245.
Course Attribute(s): CoB: Social Science

CRIM 340 - Concepts of Penology 4 hours. A survey of correctional concepts and philosophy with emphasis on the correctional institution as a community and the sociology of confinement. Additional focus on penal reform, correctional administration and innovation. Prerequisites: SOCI 110 and SOCI 245. (Cross-listed as SJST 340)
Course Attribute(s): CoB: Social Science

CRIM 351 - Seminar in Criminal Behavior 4 hours. Specific problems and issues concerning criminal behavior are examined in depth. The area of investigation varies with the disciplinary orientation of the instructor. Includes analysis of the causes of particular kinds of behavior, examination of methods of control, and consideration of current approaches to rehabilitation. Prerequisites: SOCI 245 and senior standing.
Course Attribute(s): CoB: Social Science

CRIM 400 - Special Topics 1-4 hours. An open course varying in contents from year to year, which allows concentration on special topics.
Course Attribute(s): CoB: Social Science

CRIM 450 - Independent Study 1-4 hours. Individual research by a Criminal Justice Studies major with senior standing into an area of interest. Research topics are chosen to complement material covered in other courses and to provide the student with additional information relevant to career or graduate interests. Approved Plan of Study required.

CRIM 470 - Field Work in Criminal Justice Studies 2-4 hours. 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.

Computer Science

CSCI 156 - Computer Science I 4 hours. This course is an introduction to the fundamental concepts of computer programming using Python. Topics include conditional statements, loops, recursion, procedural programming, scope of variables, doc-strings, unit-testing, dictionaries, simulation, creating and using modules and packages, and object-oriented programming.

CSCI 157 - Computer Science II 4 hours. This course covers the fundamental concepts of data structures and algorithms including stacks, queues, linked lists, trees, heaps, sorting algorithms, and mathematical analysis of running time. Prerequisite: CSCI 156 or permission of instructor.

CSCI 205 - Database Systems 4 hours. This course is an introduction to MySQL database programming. Set up of an SQL database, programming MySQL using Python, and MySQL database maintenance are covered. Prerequisite: CSCI 156. (Offered: Spring, even years)

CSCI 206 - Algorithm Design 4 hours. This course studies Algorithim design techniques including greedy algorithms, divide and conquer, dynamic programming and network flow. Additional topics include computational complexity and the P versus NP problem. Prerequisite: CSCI 156. (Offered Spring, odd years)

CSCI 305 - Theory of Computation 4 hours. This course studies computational theory in the context of theoretical computer science and mathematics. Topics include finite automata and languages, computability and Turing machines, decidability and incompleteness theorems. Prerequisite: MATH 281. (Cross-listed as MATH 305) (Offered Fall, odd years)

CSCI 331 - LAMP Server Administration 4 hours. This course covers the basics of LAMP server administration and webpage design using open source tools. Topics include Linux system administration, setting up Apache, MySQL administration, and PHP development. Prerequisite: CSCI 205.

CSCI 450 - Independent Study 1-4 hours. Independent study is undertaken by the student under the supervision and guidance of the instructor. Written Plan of Study required.

Education

EDUC 100 - Topics in Education 1-4 hours.

EDUC 105 - Education Perspectives 1 hour. This course introduces the field of education and the resources available at Alfred University necessary for academic, personal, and professional accomplishment in the field.

EDUC 120 - School Violence Prevention and Intervention Workshop (SAVE) 0 hours. This workshop provides teacher candidates with training in school violence prevention and intervention. Topics include: the warning signs that relate to violence or signal precursors to violent behavior in children; the statutes, regulations and policies relating to a safe, nonviolent school climate; academic supports and management strategies that promote a nonviolent school climate; methods for integrating social skill development and problem-solving skills into ongoing curriculum and instruction; intervention techniques for addressing violent situations; and, referral processes for students with violent behaviors. This course must be completed prior to student teaching.

EDUC 121 - Child Abuse Identification and Reporting Workshop 0 hours. This workshop is approved by, and designed to meet certification regulations of, the New York

State Education Department (NYSED). The workshop includes objectives related to detecting and reporting child abuse; meeting professional and legal responsibilities related to child abuse; strategies for preventing child abduction. This course must be completed prior to student teaching.

EDUC 122 - Dignity for All Students Workshop (DASA) 0 hours. This workshop fulfills the training requirement on harassment, bullying, and discrimination prevention and intervention under the NYS Dignity for All Students Act. This is a participatory workshop which includes activities to help students understand and address personal and hidden biases as well as related behaviors and the school setting. Topics include: introduction to the Dignity for All Students Act and reporting requirements for educators and more. This course must be taken prior to student teaching.

EDUC 230 - Psychological Foundations of Education 3 hours. This course is a survey of human developmental processes and variations, particularly as related to learning, motivation, and communication. Emphasis is placed on applying psychological knowledge, understanding, and skills to stimulate and sustain student interest, cooperation, and achievement in the classroom.

EDUC 231 - Social Foundations of Education 3 hours. This introductory course discusses the function of education in society, and, in particular, the organization of the American school system, the influences affecting our schools, and present practice and trends. This course includes the Safe Schools Against Violence in Education (SAVE) workshop required for teacher certification.

EDUC 300 - Special Topics 1-4 hours.

EDUC 345 - Education Fieldwork 3 hours. This course is designed for those students seeking New York State certification in the Middle Childhood, Adolescence and special subject areas. It includes a minimum of 100 hours of documented observation in a pre-assigned placement, along with projects, activities and the development of an initial teaching narrative. Students should design their schedules to include a significant block of time, compatible with the school day, in order to complete the required observation hours. Prerequisites: EDUC 230 and 231 and declaration of minor in education, or permission of instructor.

EDUC 374 - Integrated Methods: Social Studies, Science, Mathematics, and Computer Application 6 hours. The integrated methods course combines the teaching of Social Studies, Science, Mathematics and Computer Application into one six credit course and is taught in conjunction with classroom practicum experiences in Early Childhood/Childhood Education. Through these integrated experiences, practicum students will develop the initial ability and skill to: plan and implement appropriate learning experiences; become familiar with the purpose and contents of New York State Learning Standards in content areas and demonstrate the ability to relate these standards with the ongoing process of instructional planning; distinguish among and apply a variety of teaching approaches to accommodate differing developmental needs and learning styles of students and engage students in active learning; become familiar with appropriate strategies to assess the diverse needs of students and develop professional teacher communication and interpersonal skills. Prerequisite: Admission into the Early Childhood/Childhood Education Program.

EDUC 375 - Early Childhood/Childhood Practicum 3 hours. The practicum provides opportunities for students to observe actual classroom settings, gaining "hands on" experience while taking concurrent course work. This course includes three full days a week of field experience in two different grade level placements. Field placements in local school systems provide an opportunity for students to blend theory with practice and experiential application. Transportation to area schools is required.

EDUC 400 - Topics in Education 1-4 hours.

EDUC 405 - Literacy in the Content Area 3 hours. The course shows teachers how to apply reading methodology to subject area learning. It takes a balanced approach, providing a realistic and practical treatment of reading and methodology issues, theory and research. Prerequisites: EDUC 230 and 231 and declaration of minor in education, or permission of instructor.

EDUC 413 - Using Literature in Intermediate and Adolescent Classrooms 3 hours. This course takes a practical approach to the study and selection of literature for use in teaching intermediate and adolescent students. The riches of classical and contemporary writings for classroom use are overviewed. Various educational methods which integrate children's literature into the intermediate and adolescent curriculum are reviewed. Prerequisites: EDUC 230 and 231 and declaration of minor in education, or permission of instructor.

EDUC 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

EDUC 460 - Seminar in Teaching and Professional Development 3 hours. Taken concurrently with EDUC 462 and EDUC 463, this course addresses general issues of professional development of educators. Topics include, but are not limited to classroom management, teaching learning process, and issues of professionalism.

EDUC 461 - Student Teaching for Early Childhood/Childhood Certification 12 hours. Cooperating schools make it possible for student teachers to practice teach under typical public school conditions. The Division of Education, the major department, and cooperating teacher supervises observation, teaching, and discussion. Open only to students who are approved by the Division of Education. Transportation to area schools is required. Fingerprint clearance is recommended.

EDUC 462 - Student Teaching for Middle/Adolescent Certification 12 hours. Cooperating schools make it possible for student teachers to practice teach under typical public school conditions. The Division of Education, the major department, and cooperating teacher supervises observation, teaching, and discussion. Open only to students who are approved by the Division of Education. Transportation to area schools is required. Fingerprint clearance is recommended.

EDUC 463 - Student Teaching-Art Education 12 hours. Cooperating schools make it possible for student teachers to practice teach under typical public school conditions. The Division of Education, the major department, and cooperating teacher supervises observation, teaching, and discussion.

Open only to students who are approved by the Division of Education. Transportation to area schools is required. Fingerprint clearance is recommended.

EDUC 464 - Seminar in Professional Development: Visual Arts 3 hours. Taken concurrently with EDUC 463, this course addresses specific issues of professional development of art educators. Topics include, but are not limited to classroom management; management of art materials, teaching learning process in art, collaboration with school professionals and issues of professionalism. Students will develop the initial teaching portfolio using LlVETEXT.

EDUC 471 - Methods of Teaching Literacy 6 hours. This course involves a study of the planning and implementation of literacy instruction birth-grade 6. The big ideas of early literacy; phonemic awareness, alphabetic principle, fluency, vocabulary and comprehension instruction for all students, including those with special needs, will be covered. Prerequisite: Admission into the Early Childhood/Childhood Education Program.

EDUC 472 - Competency Skills in Teaching Literacy 3 hours. This course gives students an opportunity to demonstrate achieved competency skills for teaching literacy at the Early Childhood/Childhood level. Attention will be given to the current New York State Learning Standards and how to incorporate these standards into the curriculum. Prerequisite: EDUC 471 and admission into Student Teaching in Early Childhood/Childhood Education.

EDUC 473 - Assessment in the Early Childhood/Childhood Classroom 3 hours. This course examines assessment procedures, strategies, and techniques used and constructed for early childhood/childhood classroom teaching and learning purposes. Traditional and nontraditional means of assessment will be explored and an emphasis is placed on the alignment of assessment, instruction and content.

EDUC 474 - Orientation to the Early Childhood/Childhood Classroom 3 hours. This course helps students focus on problems, opportunities and challenges of the early childhood/childhood curriculum and classroom. It covers such issues as teacher awareness, teacher expectations, modeling, classroom management and grouping, as well as the socialization process within the early childhood/childhood classroom.

EDUC 488 - Current Teaching Methods: Middle Childhood Subjects 3 hours. Discussion of goals, methods, and materials used to successfully teach middle childhood subjects. Classroom observation and teaching required. Prerequisites: EDUC 230 and EDUC 231, declaration of minor in education.

EDUC 489 - Current Teaching Methods: Adolescent Subjects 3 hours. Discussion of goals, methods, and materials used to successfully teach middle/adolescence and special subjects. Prerequisites: EDUC 230 and EDUC 231, declaration of minor in education.

EDUC 491 - Methods and Curriculum in Art Education 3 hours. This course provides a foundation and introduction to a variety of teaching methods as well as techniques, methods and materials for art education. This course helps with the transition to teacher as students prepare for student teaching placement. Prerequisites: EDUC 230 and 231; Pre- or Co-requisite: EDUC 345, declaration of minor in education.

English

ENGL 101 - Writing I 4 hours. Study and application of the basic principles of written communication: correctness, clarity, concreteness, effective organization, and accepted forms of documentation.
Course Attribute(s): CLAS/AU: (01) Written Comm

ENGL 102 - Writing II 4 hours. This course offers intensive experience in essay writing. Through the close reading of literature and the practical experience of writing, students explore rhetorical strategies, learn accepted forms of documentation, develop a sense of voice, and deepen their responses to the written word. (ENGL 102 is prerequisite to 300 and 400-level studies in English.)
Course Attribute(s): CLAS/AU: (01) Written Comm

ENGL 200 - Special Topics in Writing 2 or 4 hours. A series of introductory writing courses, each being a study of a subject not covered in other 200-level courses. Topics may include feature writing, magazine writing, or writing in other specialized areas.
Course Attribute(s): CoB: Humanities

ENGL 202 - Fiction Workshop 4 hours. For beginning prose writers, a course on the elements, styles, and techniques of contemporary fiction and narrative. Students experiment with subject and voice with an emphasis on creating characters. Portfolio exam.
Course Attribute(s): CLAS: (C) The Arts, CoB: Humanities

ENGL 205 - The Play's the Thing! - Playwriting 4 hours. This team-taught course combines beginning acting exercises with improvisations in writing. Texts include full-length plays and one-acts. Students are expected to write and revise one-act plays over the course of the semester. (Cross-listed as THEA 205)
Course Attribute(s): CLAS: (C) The Arts, CoB: Humanities

ENGL 206 - Poetry Workshop 4 hours. A beginning writing course in poetry with an emphasis on originality and freshness of language and a basic understanding of poetic form. Required work includes extensive reading of contemporary poets, weekly writing, peer review, and a final portfolio of revised poems.
Course Attribute(s): CLAS: (C) The Arts, CoB: Humanities

ENGL 211 - The Short Story 2 or 4 hours. This introductory course may adopt one or more of the following approaches: an historical survey of the genre, examining the emergence and growth of this literary form; an aesthetic treatment; a cultural stance, illustrating how class, gender, and ethnicity influence literary texts; a thematic ordering, revealing how different works treat familiar themes.
Course Attribute(s): CLAS: (A) Literature, CoB: Humanities, SoAD: Humanities-'Other'

ENGL 213 - Introduction to Poetry 2 or 4 hours. This course introduces students to the main traditions of English verse and the fundamentals of poetic form. Selections include the major poets of the English language, as well as contemporary British, Irish, and American poets.
Course Attribute(s): CLAS: (A) Literature, CoB: Humanities, SoAD: Humanities-'Other'

ENGL 214 - Introduction to Drama 2 or 4 hours. A study of plays as literature, parallel to other genres, but unique by way of staging and performance. The course examines comedy and tragedy as well as less traditional dramatic forms. Readings are drawn from plays of ancient Greece and Rome, the Middle Ages and the Renaissance, the Neoclassical Period, and the twentieth century.
Course Attribute(s): CLAS: (A) Literature, CoB: Humanities, SoAD: Humanities-'Other'

ENGL 217 - Blood, Guts and Alphabets: The Gory Truth about Children's Literature 4 hours. Blood, Guts and Alphabets explores the gritty truth about children's literature. From picture books and fairy tales, to intermediate and YA fiction, we'll think about what it means to be a child, and what it means to be human, what children's literature is for, and how it reflects many of the difficult truths and injustices of the actual world we live in. Who's afraid of the big bad wolf? We aren't. (Offered on demand)
Course Attribute(s): CLAS: (A) Literature

ENGL 220 - Special Topics in Literature 2 or 4 hours. A series of introductory courses, each being a study of literature not covered in other 200-level courses.
Course Attribute(s): CLAS: (A) Literature, CoB: Humanities, SoAD: Humanities-'Other'

ENGL 222 - The Harlem Renaissance 4 hours. In this course students explore the literature and music of African-Americans produced in and around Harlem in New York City in the 1920s to the 1940s. Central to such exploration will be the contemporary cultural and political issues that faced the Afro-American artist. (Cross-listed as SJST 222)
Course Attribute(s): CLAS: (A) Literature

ENGL 225 - Shakespeare and Cinema 2 or 4 hours. This course explores some of Shakespeare's most popular plays and their film adaptations. Students focus on the literary analyses of character, theme, and language in the written texts. We also compare the cultural contexts of representative comedies, tragedies, and histories, with their contemporary film settings.
Course Attribute(s): CLAS: (A) Literature, CoB: Humanities, SoAD: Humanities-'Other'

ENGL 226 - The Holocaust and Literature 4 hours. In this course students examine the Nazi destruction of the European Jews through diaries, survivors' memoirs, novels, poetry and drama. Additionally, representations of the Holocaust in art, recorded testimony, public memorials, film and music are explored. (Cross-listed as SJST 226)
Course Attribute(s): AU: Global Perspective, CLAS: (A) Literature, CoB: Humanities

ENGL 230 - Special Topics in Film 2 or 4 hours. A series of introductory courses, each being a study of film not covered in other 200-level film courses.
Course Attribute(s): CLAS: (C) The Arts, CoB: Humanities

ENGL 243 - Lunatics, Lovers, and Poets: Southern Storytellers 2 or 4 hours. Southerners don't hide their skeletons in closets; they invite them into the living room to entertain at tea. This course focuses on works which examine what Flannery O'Connor defined as the Southern grotesque-individuals "forced to meet the extremes of their own nature." Exploring the world created when tragic merges with comic, other writers might include Faulkner, Williams, Welty, Percy, Crews, Dickey, and Tyler.
Course Attribute(s): CLAS: (A) Literature, CoB: Humanities, SoAD: Humanities-'Other'

ENGL 254 - Women Writers 2 or 4 hours. A course that examines issues of language, gender, and culture portrayed through the lens of the woman writer. Texts may include novels, stories, autobiographies, essays, letters, and poetry. (Cross-listed as SJST 254, WGST 254)
Course Attribute(s): CLAS: (A) Literature, SoAD: Humanities-'Other'

ENGL 256 - Multicultural American Literature 4 hours. This course explores the rich diversity of American literature, raising questions like What does it mean to be or become American? What is gained, what is lost, what can be protected or preserved? What is the meaning of the past, of roots, of traditions? Students examine how this body of literature reimagines the dominant American culture and reflect on their own multicultural competence. (Cross-listed as SJST 256, WGST 256)
Course Attribute(s): CLAS: (A) Literature, CoB: Humanities, SoAD: Humanities-'Other'

ENGL 281 - Literature and Science 2 or 4 hours. "Three quarks for Muster Mark" (James Joyce). This course will explore and challenge the boundaries separating disciplines. Fictional representations of emerging technologies, medical nightmares, and futuristic utopias and dystopias are all possibilities for discussion.
Course Attribute(s): CLAS: (A) Literature, CoB: Humanities, SoAD: Humanities-'Other'

ENGL 292 - Tales of Terror 2 or 4 hours. "Only the perverse fantasy can save us" (Goethe). If you like women in white, gray castles, and dark secrets, this course is for you. An exploration of the conventions and tropes in Gothic literature.
Course Attribute(s): CLAS: (A) Literature, SoAD: Humanities-'Other'

ENGL 293 - Writers Gone Wild: Literature and the Environment 4 hours. We explore representations of the natural world in literary texts, asking questions like "does my dog really love me or am I anthropomorphizing?" "Is gardening an act of love, ownership, creativity, or something else entirely?" "Are we really leading lives of quiet desperation, and how can hoeing beans help?"
Course Attribute(s): CLAS: (A) Literature, CoB: Humanities, SoAD: Humanities-'Other'

ENGL 325 - Survey of British Literature I 3 hours. This course provides an overview of early British literature: from Beowulf to Milton, it also includes Chaucer; 16th and 17th Century Poetry and Drama; Shakespeare and the Jacobeans. Prerequisite: One 200-Level Literature course.
Course Attribute(s): CoB: Humanities

ENGL 326 - Survey of British Literature II 3 hours. This course provides an overview of British literature after 1660: from the Restoration to the Modernists, it also includes 18th-Century Poetry, Drama, and Prose; 19th and 20th-Century Novels; Romantic, Victorian, and 20th-Century Poetry. Prerequisite: One 200-level Literature course.
Course Attribute(s): CoB: Humanities

ENGL 327 - Survey of American Literature 4 hours. This course introduces students to American literature in cultural context, with particular attention to constructs of Americanness as they appear in or are challenged by literary texts. Students further develop analytical reading and writing skills through weekly one-hour workshops. Prerequisite: One 200-level Literature course.
Course Attribute(s): CoB: Humanities

ENGL 328 - The Language of Literary Art 4 hours. This course introduces students to the elements of literary art. Through a sequence of readings and problems, students gain an understanding of diction, figuration, genre, point of view, and context as shaping components of literary form. Prerequisite: ENGL 102.
Course Attribute(s): CoB: Humanities

ENGL 400 - Major Figures in Literature 2 or 4 hours. A series of courses, each being a detailed examination of the work of a single major writer. Currently these include: Homer, Dante, Swift, Hardy, Lawrence, Cather, Hemingway, Faulkner, and Morrison.
Course Attribute(s): CoB: Humanities

ENGL 406 - A Medieval Bookshelf 4 hours. This course introduces students to the connections between medieval English literature, its classical sources, and medieval European literatures.
Course Attribute(s): CoB: Humanities

ENGL 407 - Chaucer 4 hours. This course introduces students to Chaucer's works. All readings are in Middle English, and students will gain competence in reading and pronouncing Chaucer's English. Readings include" The Book of the Duchess," excerpts from "The Legend of Good Women," "Troilus and Criseyde," and excerpts from "The Canterbury Tales."
Course Attribute(s): CoB: Humanities

ENGL 408 - Women Writers in the Middle Ages 4 hours. This course examines the writings of medieval women - abbesses, merchants, wives, mothers, and mystics - to explore the challenges female writers such as Heloise, Margery Kempe, Julian of Norwich, and Christine de Pizan presented to orthodox Christianity, to gender stereotypes, and to medieval political and social structures. (Cross-listed as WGST 408)
Course Attribute(s): CoB: Humanities

ENGL 409 - American Realism: Race/Class/Gender/Place 4 hours. Realism claims to offer life as it is actually lived, to offer not the Truth but the truths of human experience. Through both classic and new-canonical works of realism, naturalism, and regionalism, this course explores how individuals are located in social and geographic places.

ENGL 410 - English Renaissance Literature 4 hours. This course focuses on the poetry and drama of the sixteenth and seventeenth centuries. The Elizabethan, the metaphysical, and the classical traditions of poetry are represented by Spenser, Shakespeare, Donne, Jonson, and Milton; the Elizabethan-Jacobean drama is presented by such dramatists as Marlowe, Jonson, and Webster.
Course Attribute(s): CoB: Humanities

ENGL 411 - Shakespeare's Comedies and Histories 4 hours. This course introduces theories of comedy and explores Shakespeare's development as a comic dramatist as students read the festive and romantic comedies, comparing his early efforts with his mature plays. It also examines Shakespeare's dramatization of English and Roman history, the genre of the history play, and the playwright's adaptation of history to the comic and tragic modes.
Course Attribute(s): CoB: Humanities

ENGL 412 - Shakespeare's Tragedies 4 hours. This course focuses on Shakespeare as a tragic artist. It introduces theories of tragedy, explores the playwright's experimentation with the genre, comparing his early efforts with his mature accomplishments, and examines some tragi-comedies.
Course Attribute(s): CoB: Humanities

ENGL 413 - The Eighteenth Century 4 hours. This course explores the works of such authors as Jane Austen, Oliver Goldsmith, Matthew Lewis, Lady Mary Wortley Montagu, and Jonathan Swift against the background of eighteenth-century values and ideas. Genres include the novel, drama, and poetry.
Course Attribute(s): CoB: Humanities

ENGL 414 - English Romantic Movement 4 hours. This course focuses on the well-known works of Blake, Wordsworth, Coleridge, Byron, Shelley, and Keats as well as on the less well known but important works of writers such as Anna Barbauld, Mary Robinson, and John Clare. Poems will be supplemented by works of fiction associated with British Romanticism such as Mary Shelley's "Frankenstein."
Course Attribute(s): CoB: Humanities

ENGL 415 - Victorian Literature 4 hours. This course focuses on major Victorian poets and novelists such as Alfred Lord Tennyson, Matthew Arnold, Robert Browning, Elizabeth Barrett Browning, Christina Rossetti, Gerard Manley Hopkins, Charles Dickens, the Brontes, Thomas Hardy, and Oscar Wilde.
Course Attribute(s): CoB: Humanities

ENGL 422 - Irish Literature: 1690-Present 4 hours. A nation rich in song and story, Ireland has produced a distinctive national literature. This course explores three centuries of Irish writing. Genres include narrative, drama, and poetry. Selections include Swift, O'Rathaille, O'Bruadair, Mangan, Wilde, Shaw, Pearse, Yeats, Joyce, Heaney, and Kavanagh.
Course Attribute(s): CoB: Humanities

ENGL 424 - Life and Art of James Joyce 4 hours. This course focuses on Joyce's fiction, including "Dubliners," "A Portrait of the Artist as a Young Man," "Ulysses," and selections from "Finnegans Wake." Biographical readings will accompany the literature, and Homer's "Odyssey" will be studied in parallel with Joyce's "Ulysses."
Course Attribute(s): CoB: Humanities

ENGL 431 - 19th Century American Literature 4 hours. This course explores the diverse literary experiments of a nation striving toward cultural and aesthetic independence. Readings and critical perspectives vary according to instructors.
Course Attribute(s): CoB: Humanities

ENGL 432 - 20th Century American Visions 4 hours. This course examines modern and postmodern literary experiments as

manifested in American culture. Readings and critical treatments vary according to instructors.
Course Attribute(s): CoB: Humanities

ENGL 433 - Voices in British and American Poetry 4 hours. The "experience of each new age requires a new confession, and the world seems always waiting for its poet" (Emerson). Selected readings introduce representative poetic voices throughout each British and American age, from the Middle Ages to the present, from Beowulf to Prufrock.
Course Attribute(s): CoB: Humanities

ENGL 434 - African-American Literature 4 hours. This course traces the directions of African-American literature from the slave narrative through the Harlem Renaissance to contemporary fiction, drama, and poetry. Writers such as Frederick Douglass, Jean Toomer, Zora Neale Hurston, Langston Hughes, Richard Wright, Ralph Ellison, Lorraine Hansberry, James Baldwin, Alice Walker, and Toni Morrison are included.
Course Attribute(s): CoB: Humanities

ENGL 442 - Modern and Contemporary Drama 2 or 4 hours. This course begins with the birth of the modern play in the late 19th century, then traces the evolution of dramatic literature to the present time. Readings selected from such playwrights as Ibsen, Strindberg, Chekhov, Shaw, O'Neill, Williams, Miller, Ionesco, Albee, Baraka, Pinter, Stoppard, Shepard, Shaffer, Norman, and Mamet.
Course Attribute(s): CoB: Humanities

ENGL 445 - Modernism 4 hours. An examination of innovative poetry, fiction and drama produced in the first half of the twentieth century in England, Ireland, and America, with selected texts in translation when appropriate.
Course Attribute(s): CoB: Humanities

ENGL 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

ENGL 451 - Publishing Practicum 4 hours. Students work through all aspects of the process to publish an edition of an out-of-copyright text: conducting market research, selecting and editing the primary text, researching and writing an introduction, creating appropriate timelines and appendices, laying out the book using InDesign, designing the cover, procuring ISBN and Library of Congress numbers, submitting the text to the printer, and publishing the book using a print-on-demand model. Prerequisite: ENGL 102. (Cross-listed as COMM 451)

ENGL 459 - Literary Criticism and Theory 2 or 4 hours. This course examines how literature has been approached and understood from the time of Plato to the present day. Readings are selected from those critical and theoretical statements which have most profoundly influenced literary response and even literature itself.
Course Attribute(s): CoB: Humanities

ENGL 460 - Special Topics Seminar-Writing 1-4 hours. A series of courses, each being an advanced study of a subject not covered in detail by other 400-level courses. Prerequisite: ENGL 328 or one 200-level creative writing course (ENGL 200-206).

ENGL 461 - Special Topics Seminar-Literature 1-4 hours. A series of courses, each being an advanced study of a subject not covered in detail by other 400-level courses.

ENGL 472 - Dramatis Personae 4 hours. An advanced poetry writing course for students interested in exploring character dynamics through the vehicle of the persona. Each student is expected to invent several personae and to write in the voices of those characters. The primary focus of the course is the writers' workshop. Prerequisite: ENGL 328 or one 200-level creative writing course (ENGL 200-206).
Course Attribute(s): CoB: Humanities

ENGL 474 - Writing the Short Story 4 hours. This course is an intensive writing workshop with an emphasis on the dynamics of the short story. Students are encouraged to experiment with form while learning the techniques of the well-crafted story. Portfolio exam. (May be repeated one time for credit.) Prerequisite: ENGL 328 or one 200-level creative writing course (ENGL 200-206).
Course Attribute(s): CoB: Humanities

ENGL 475 - Writing Formal Poetry 4 hours. This advanced creative writing course focuses on the appreciation and craft of formal poetry. Students will learn to write in iambic meters, and will learn definitions and read examples of traditional forms such as blank verse, sonnets, sestinas, villanelles, triolets, and ghazals. The primary focus on the course will be the writers' workshop, in which students compose and critique poems written in traditional forms. Prerequisite: ENGL 328 or one 200-level creative writing course (ENGL 200-206).
Course Attribute(s): CoB: Humanities

ENGL 476 - Writing the Long Poem or Poetic Sequence 4 hours. This creative writing course explores long poems and poetic sequences by reading and analyzing examples, then using those models to create our own poems. Through workshop and revision, students will write either a long poem or sequence of shorter poems. Prerequisite: ENGL 328 or one 200-level creative writing course (ENGL 200-206).
Course Attribute(s): CoB: Humanities

ENGL 481 - International Women Writers 4 hours. In this course we explore literature written by contemporary women from different cultures. Study focuses on voice, content, and style, with some attention to the conditions in which the work was produced and to its reception. (Cross-listed as WGST 481)
Course Attribute(s): AU: Global Perspective, CoB: Humanities

ENGL 485 - Internship in English 1-4 hours. An off-campus independent study project under the direction of a faculty sponsor. Students gain exposure to possible careers related to English studies. Requirements for this project include a journal, job evaluations, and a final report. May be taken during the summer or semester abroad.

ENGL 496 - English Honors Thesis 2 hours. To graduate with Honors in English, students must attain a cumulative GPA of 3.30 in their major, successfully complete this senior project, and pass an oral examination. Eligible seniors should discuss their project plans with the Division Chair before registering for ENGL 496.

English as a Second Language
ESL 101 - English Skills for Multilingual Students 4 hours. This course focuses on building skills in listening, speaking, grammar and writing for students whose first language is not English.

ESL 102 - Reading and Vocabulary Development for Multilingual Students 2 hours. This course focuses on developing English language reading skills in four crucial areas: extensive reading, vocabulary development, comprehension, and reading fluency. Students will gain practice in each area, allowing them to tackle their academic reading load more effectively.

ESL 400 - Special Topics 1-4 hours.

ESL 401 - Speaking and Listening 2 hours. This course will help non-native English speakers improve their speaking and listening skills. Students will work on pronunciation, oral presentation, and extracting meaning from conversations and other kinds of extended discourse.

Environmental Studies
ENVS 100 - Special Topics 1-4 hours. Consideration of environmental issues and topics introduced in 100-level courses. Topics vary from term to term.

ENVS 101 - Environmental Studies I - Natural Science 4 hours. An introductory science course for environmental studies majors, which may also be used by other students to fulfill graduation requirements in natural sciences. This course provides an understanding of basic ecological principles and an awareness of the interaction of physical, chemical, and biological forces on Earth.
Course Attribute(s): AU: Global Perspective, CLAS: (F-III) Science/Society, CLAS: (F2) Nat Sci-no Lab, CoB: Natural Science

ENVS 102 - Environmental Studies I - Social Science 4 hours. This interdisciplinary social science course examines the environmental implications of various socio-cultural, economic and political patterns in primitive, agricultural and industrial settings. These problems in contemporary America receive special attention.
Course Attribute(s): AU: Global Perspective, CoB: Social Science

ENVS 106 - The Water Planet 4 hours. All ecosystems on earth depend on water, but the supply of fresh, clean water is limited and endangered. In this course, students study the water cycle and how humans interact with this limited resource. Emphasis is placed on practical activities (measurement and analysis of water) and contemporary environmental issues threatening our water supply, including oceanic dead zones, anthropogenic pollution in precipitation, impacts of over withdrawal of groundwater (e.g. subsidence, sinkholes) and effects of climate change on water availability.
Course Attribute(s): CLAS: (F-III) Science/Society, CoB: Natural Science

ENVS 120 - Hazardous Materials 3 hours. This course will acquaint the student with the complexities and dangers of environmental work involving hazardous wastes. Aspects of hazardous materials chemistry, legal and regulatory aspects of hazardous materials, safe work practices, and basics of toxicology will be covered.
Course Attribute(s): CoB: Natural Science

ENVS 200 - Special Topics 1-4 hours. Further consideration of environmental issues and topics introduced in 200-level courses. Topics vary from term to term.

ENVS 205 - Environmental Data Analysis 4 hours. Basic techniques and tools for manipulation of quantitative data, emphasizing environmental studies, data collection, analysis on spreadsheets and statistical packages, graphical presentation. Prerequisite: ENVS 101 or permission of instructor.
Course Attribute(s): CLAS: (03) Quant Reasoning, CoB: Quant Reasoning, CoB: Social Science

ENVS 206 - Fieldcraft-Outdoor Proficiency 4 hours. This course helps students acquire basic skills to 1) use field tools and 2) build habits essential to the study of environmental and geological sciences. Topics include note taking, map reading, navigation, data collection and data sharing. Prerequisite: One Geology or Environmental Studies course plus permission of instructor. (Cross-listed as GEOL 206)

ENVS 214 - Environment, Politics and Society 4 hours. This course examines multiple trajectories of environmental change in the United States since the dawn of the industrial age, explores the basic societal forces that drive processes of environmental decay today, and explores major environmental issues/controversies at the center of contemporary debate. (Cross-listed as POLS 214, SOCI 214)
Course Attribute(s): CoB: Social Science

ENVS 220 - Introduction to Geographic Information Systems 4 hours. This course engages students in spatial thinking while providing them with the fundamentals to manipulate geographic (geospatial) data and utilize the ArcGIS geographic information system (GIS) for map production, spatial analysis and problem solving.
Course Attribute(s): CoB: Social Science

ENVS 240 - Environmental Research Procedures I 3 hours. In this course, students are taught contemporary methods for studying and solving environmental problems. These include geological, biological, and geographical methods. Students are given the opportunity in the course to learn and practice the procedures while working on relevant problems.
Course Attribute(s): CoB: Social Science

ENVS 241 - Environmental Research Procedures II 3 hours. Continuation of ENVS 240. In this course, students are taught contemporary methods for studying and solving environmental problems. These include geological, biological, and geographical methods. Students are given the opportunity in the course to learn and practice the procedures while working on relevant problems. Prerequisite ENVS 240.
Course Attribute(s): CoB: Social Science

ENVS 300 - Special Topics 1-4 hours. Further considerations of environmental issues introduced in 100 and 200-level courses.

ENVS 310 - Ecology of the Bahamas 3 hours. We explore concepts central to ecology through the exploration of Bahamian plant and animal life, using an immersive, natural history approach. We observe connections between natural selection, biogeography, disturbances and historic land use. The course

features a week-long field trip at the Gerace Research Center, Bahamas. Prerequisites: ENVS 101 or BIOL 150 - plus permission of instructor.
Course Attribute(s): AU: Global Perspective, AU: Travel Courses, CoB: Natural Science

ENVS 315 - Herpetology 3 hours. This course explores the scientific study of reptiles and amphibians. Topics include evolution, taxonomy, natural history, ecology, conservation issues and the techniques used to study reptiles and amphibians. Prerequisite: ENVS 101 or BIOL 150 or permission of instructor.

ENVS 320 - Advanced GIS Applications 4 hours. This course advances the learning outcomes of Introduction to GIS (ENVS 220); namely to engage in spatial thinking while utilizing the ArcGIS geographic information system (GIS). Advanced applications include the raster spatial data model, remote sensing and spatial statistics. Prerequisite: ENVS/CSCI 220 or permission of instructor.
Course Attribute(s): CoB: Social Science

ENVS 330 - Ornithology 4 hours. This course explores what makes birds unique. Topics include evolution, taxonomy, natural history, ecology, and conservation. Students will also spend time outside developing identification skills and learning scientific field research techniques. Prerequisite: ENVS 101, BIOL 150, or permission of instructor.

ENVS 351 - Environmental Biogeochemistry 4 hours. Transformation and movement of elements on Earth, with emphasis on effects of humans and potential global change. Projects involve field and instrumental analyses. Prerequisites: ENVS 101 and CHEM 105 or permission of instructor.
Course Attribute(s): CoB: Natural Science

ENVS 357 - Conservation Biology 4 hours. This course focuses on the biology that underlies our efforts to conserve genetic, species, and community diversity and the community/ecosystem/landscape dynamics that sustain them. We will review concepts of genetics, population biology, and landscape ecology to understand threats to populations and species and the techniques used to sustain them. Prerequisite: ENVS 101 or BIOL 150. (Cross-listed as BIOL 357)
Course Attribute(s): CoB: Natural Science

ENVS 360 - Junior Seminar 1 hour. Students in this course attend weekly seminars on pertinent topics related to Environmental Studies. Required of all Environmental Studies majors.

ENVS 400 - Special Topics 1-4 hours. Further considerations of environmental issues introduced in lower level courses.

ENVS 415 - Natural Resources Management 3 hours. An introduction to the pressures and principles guiding the management of land, plants and wildlife. We discuss the philosophical and policy contexts within which management decisions are made, the associated governance and stewardship issues, and the technical tools available.
Course Attribute(s): CoB: Social Science

ENVS 440 - Environmental Research Planning 2 hours. How research in environmental fields is developed, proposed, performed, and presented, with an emphasis on research projects to be conducted as required independent studies for Environmental Studies majors.

ENVS 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

ENVS 485 - Internship in Environmental Studies 1-4 hours. An off-campus independent study project. Students gain experience by serving as interns at public agencies or private firms which deal with environmental problems. Instructor permission required.

ENVS 490 - Senior Seminar 2 hours. Students in this course will be guided through some of the common aspects of their senior research projects, such as literature searches, task mapping, and development of analytical protocols. All students will be required to present a weekly report on the progress of their senior research. Students will also attend the weekly Environmental Studies seminar series and learn about research techniques and procedures used by professionals. Required of all ENVS majors.

ENVS 499 - Senior Project in Environmental Studies 2-4 hours. Independent research under an instructor's supervision. Presentation of project is required for graduation.

Equestrian
EQUS 100 - Special Topics 2 hours. Offerings in riding or other equestrian physical activity which vary year to year.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

EQUS 101 - English Riding: Level I 2 hours. Open to students with little or no riding experience for basic hunter seat equitation taught at the walk, trot and canter. Topics include horse grooming, hoof care, safety procedures (on and off the horse), care of riding equipment, and a horse's health.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

EQUS 102 - English Riding: Level II 2 hours. Competent hunter seat flat riders are introduced to jumping, trail and recreational riding. The course emphasizes safety and training riders to recognize their own abilities in the ring, on the trail, or in the barn. Topics include horse care, cost and management of one's own horse. Prerequisite: EQUS 101 or permission of instructor.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

EQUS 103 - English Riding: Level III 2 hours. Riders entering this course should have a secure hunter seat at the walk, trot and canter and should exhibit good control over single fences (maximum height two feet). This course further conditions riders for more strenuous exercises on the flat and the course requires riders to jump small courses. Prerequisite: EQUS 102 or permission of instructor.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

EQUS 104 - English Riding: Level IV 2 hours. Riders at this level should be competent to walk, trot, canter, and jump with reasonably good equitation. This course furthers the riders' abilities over higher (maximum three feet) fences and more

complex courses. Riders continue practice teaching and, time permitting, pleasure and practice sessions, as well. Prerequisite: EQUS 103 and permission of instructor.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

EQUS 105 - Introduction to Dressage 2 hours. Open to students with intermediate experience in the English disciplines. Dressage is offered to equip students with a broad base of knowledge in classical horsemanship encompassing theory, philosophy, riding, and care of the horse. Students will be introduced to the basics of training level dressage. Prerequisite: EQUS 102 or permission of instructor.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

EQUS 110 - Western Riding: Level I 2 hours. Open to students with little or no riding experience in the western disciplines. Skills taught include: bridling, saddling, and horsemanship for the walk, jog and lope. Topics include grooming, hoof care, lungeing, safety procedures, care of horse and equipment.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

EQUS 111 - Western Riding: Level II 2 hours. Open to students with beginning experience in the western disciplines. Skills taught include: western pleasure, horsemanship and showmanship patterns. Topics include safety procedures, proper tack, attire, equipment, and care of horse. Prerequisite: EQUS 110 or permission of instructor.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

EQUS 112 - Western Riding: Level III 2 hours. Open to students with intermediate experience in the western disciplines. Skills taught include: western pleasure, horsemanship, showmanship and introductory trail obstacles found on trail course patterns. Topics include showing the all-around horse at breed shows, safety procedures, care of horse and equipment. Prerequisite: EQUS 111 or permission of instructor.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

EQUS 113 - Western Riding: Level IV 2 hours. Open to students with intermediate or above experience in the western disciplines. Skills taught include: speed events including barrel racing, pole bending, stake race, and goat tying. Topics include: safety procedures, care of horse and equipment and introductory knowledge of team penning. Prerequisite: EQUS 112 and permission of instructor.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

EQUS 115 - Dressage II 2 hours. Theoretical and practical experience in effectively riding dressage at USDF Training Level and beginning First Level movements. The practical side of this course prepares the student for introduction to competition. The theoretical side develops the student's comprehension of the history and philosophy of dressage. Prerequisite: EQUS 103 or 105; or permission of instructor.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

EQUS 118 - Introduction to Reining 2 hours. Designed for the advanced rider who wants to become proficient in riding reining patterns. Lecture topics include: general knowledge and observation of reining patterns, condition of the horse needed to compete in reining, health, safety issues, and the shoeing needs of reining horses. Lab skills include: loping circles, lead changes, spins, run downs, sliding stops, and roll backs. Prerequisite: EQUS 112 or permission of instructor.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

EQUS 119 - Introduction to Reined Cow Horse 2 hours. The course builds on the skills taught in EQUS 118-Introduction to Reining and includes the use of cows to further students' knowledge of Reined Cow Horse events and the rules and regulations of the events. Prerequisite: permission of instructor.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

EQUS 120 - Driving I 2 hours. Open to all students regardless of horse experience. Students learn safe ground handling practices and basic horse care as well as harnessing, hitching and driving single horses. Other topics include safely starting a horse in harness and exploring historical and current disciplines in driving.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

EQUS 121 - Driving II 2 hours. Students learn safe ground handling practices around draft horse pairs, including harnessing, line driving, hitching and driving implements. Additional topics include care and management of draft horses and draft horse showing. Prerequisite: EQUS 120.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

EQUS 122 - Driving III 2 hours. Students apply draft horse driving and management skills in hands-on field work. Course topics include the use of horses to do work, driving a variety of implements and tools, and the modern uses of draft horses in the industry. Prerequisite: EQUS 121.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

EQUS 200 - Special Topics 1-4 hours. An open theory/classroom course varying in content from year to year.

EQUS 205 - Introduction to Equine Science 4 hours. This course covers classroom studies of anatomy, nutrition, disease, and veterinary aspects of owning a horse or running a stable. Barn assignments deal with particular injuries and there are demonstrations with horses in terms of wrapping various wounds and treating common equine ailments.

EQUS 210 - Methods of Teaching English Riding 4 hours. Students in this course are required to observe teaching of classes and to discuss objectives and methods with the instructor. In time the student acts as apprentice teacher under the instructor's supervision. When ready, the student assumes the role of instructor with the responsibility of setting up safety rules and class curriculum. The student's efforts are reflected in the riders' progress. Prerequisite: EQUS 103.

EQUS 215 - Equine Business Management 4 hours. Students learn about the management aspects of a stable including: the needs and basic care of the equine, layout and design of stables, and running a stable as a business.

EQUS 216 - Horse Show Management 4 hours. Students learn what is involved in managing a horse show including planning, prize list, advertising, officials, knowledge of rules of sanctioning organizations, ordering awards. Students must be available to work some weekends at shows held at Equestrian Center. At the end of the semester, students manage their own show at the Center.

EQUS 218 - Judging Horse Shows 4 hours. Open to students with advanced level riding skills in either English or Western riding. Students will learn how to evaluate and place conformation, halter and performance classes according to the standards set by various organizations and breeds of horses.

EQUS 223 - Hunter and Jumping Course Design 2 hours. Technical aspects and differences between hunter, jumper, equitation and stadium jumping courses will be discussed. Hands on application will be provided by assisting show managers with course design at shows at the Equestrian Center along with assisting instructors with setting jumps for jumping classes.

EQUS 225 - Equine Nutrition 2 hours. This course examines digestive physiology; involving carbohydrates, proteins, fats, minerals and vitamins. Also, a practical approach to proper feedstuffs and use of quality feedstuffs to maintain health and productivity of horses.

EQUS 226 - Caring for the Equine Anatomy 2 hours. Guest speakers introduce students to alternative equine anatomy care and caring for the equine anatomy in general. An equine chiropractor, a saddle fitter and farrier, among others, discuss the importance of their professions in caring for the horse's anatomy. Students learn the history and benefits of equine massage, study equine skeletal anatomy, connective tissue, muscle location (origin and insertion) and function.

EQUS 228 - The Equine Industry in Ireland 2 hours. Students learn about the strategies for the development and promotion of the internationally competitive Irish Sport Horse Industry, which has evolved as a collaboration of the governing bodies of Ireland with Irish Sport Horse Breeders. Travel to Ireland for 10 days is a required part of the course.
Course Attribute(s): AU: Global Perspective, AU: Travel Courses

EQUS 385 - Internship in Equestrian Studies 1-4 hours. An off-campus project in the field serving as an intern in an area of equestrian studies. When the field experience is completed, a journal and final report is submitted.

EQUS 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

French

FREN 101 - French I 4 hours. Introduction to the language and culture of the French-speaking world; speaking, reading, understanding and writing. Practice in language lab. Emphasis on communicative skills. Assumes no prior knowledge of the language. Not open to students with credit in FREN 102 or equivalent.
Course Attribute(s): CLAS: (02) Foreign Language, CoB: Humanities

FREN 102 - French II 4 hours. This course builds on French I, increasing students' communicative skills and exploration of French-speaking cultures. Students improve their proficiency in speaking, listening, writing and reading French through engaging in class activities, in the language lab and with independent work. Students learn to perform practical tasks like ordering in restaurants, dressing, visiting others, and making living arrangements. Prerequisite: FREN 101, 41-60% on French Language Placement Exam, or permission of instructor.
Course Attribute(s): CLAS: (02) Foreign Language, CoB: Humanities

FREN 200 - Special Topics 1-4 hours. Content varies. Prerequisite: FREN 102, 61% or higher on French Language Placement Exam, or permission of instructor.

FREN 201 - French III 4 hours. Continuation and further development of the skills learned in FREN 102. Prerequisite: FREN 102, 61% or higher on French Language Placement Exam, or permission of instructor.
Course Attribute(s): CLAS: (02) Foreign Language, CoB: Humanities

FREN 202 - French IV 4 hours. Continuation and further development of the skills learned in FREN 201. Prerequisite: FREN 201 or permission of instructor.
Course Attribute(s): CLAS: (02) Foreign Language, CoB: Humanities

FREN 210 - Global Perspectives: Paris 2 hours. This course enables students to develop an understanding and appreciation of another culture, first in the classroom, and then two weeks in Paris. The focus is on history, art, and contemporary culture. Open to all students. (Cross-listed as ARTH 210, GLBS 210)
Course Attribute(s): AU: Global Perspective, AU: Travel Courses, CoB: Humanities

FREN 300 - Special Topics 1-4 hours.

FREN 301 - Advanced French Conversation 4 hours. Intensive practice in speaking French, with particular attention to the French sound system. Topics for conversation are taken from contemporary French journals, newspapers, films, etc. Prerequisite: FREN 202 or permission of instructor.
Course Attribute(s): CoB: Humanities

FREN 302 - Advanced French Grammar and Composition I 4 hours. An analysis of the grammatical structure of the French language with emphasis on the more complex problems in French syntax and usage, followed by practice in composition. The course is conducted in French. Prerequisite: FREN 202 or permission of instructor. (Alternate years)
Course Attribute(s): CoB: Humanities

FREN 305 - French Pronunciation and Phonetics 2 hours. This course focuses on oral proficiency and listening comprehension, as well as French phonetics. Students gain a better understanding of the phonetic structure of French and improve all aspects of their pronunciation, including intonation, phrasing, syllable structure and stylistic interpretation. Prerequisite: FREN 201.

FREN 311 - French Literature I 4 hours. A historical-critical view of French literature from the Middle Ages through the 18th century. Readings from anthologies and selected complete texts from each period. Discussion and reading in French. Prerequisite: FREN 310 or permission of instructor.
Course Attribute(s): CoB: Humanities

FREN 316 - Contemporary French Culture 4 hours. Introduction to the most important elements of present-day French culture, literature, film, art, and music. Recent history and politics, economics and social structure; religion, family, cuisine, and customs. Readings and discussions in French. Prerequisite: FREN 202 or permission of instructor. (Alternate years)
Course Attribute(s): AU: Global Perspective, CoB: Humanities

FREN 400 - Special Topics in French 1-4 hours. Content varies from year to year with topics such as French Women's Literature and Feminist Theory, Bilingualism in Quebec, Medieval French Literature, Ethnic Minorities in France, Caribbean French Culture. The course is conducted in French. Prerequisite: FREN 310 or permission of instructor.

FREN 420 - The Art of French Translation 4 hours. Intensive practice in translation from French to English, and from English to French. Current nonfiction, fiction, periodicals, and newspapers are materials for translation. The course is conducted in French. Prerequisite: FREN 303.
Course Attribute(s): CoB: Humanities

FREN 450 - Independent Study 1-4 hours. For students with a particular interest in an aspect of French language or literature not covered in any established course. Approved Plan of Study required.

FREN 485 - Internship in French 1-4 hours. An off-campus project in consultation with faculty in the Division of Modern Languages. Students gain experience in a variety of careers involving French and related fields. The internship must be conducted in French. Requirements for this project include a journal, job evaluations, and a final report. May be taken during the summer or semester abroad. FREN 202 or equivalent proficiency recommended.
Course Attribute(s): AU: Global Perspective

FREN 490 - Modern Languages Senior Seminar 0 hours. In this seminar students have the opportunity to complete their electronic portfolio and prepare for an oral defense. In consultation with professors and peers, students select the documents to include in keeping with portfolio requirements. As part of this seminar, students write and revise their Senior Reflective Statement and their resume or curriculum vitae.

Geology
GEOL 101 - This Dynamic Earth 4 hours. An introduction to the nature of the materials that make up the earth, their genesis and arrangement (both inside the earth and at the surface) and to the physical processes that act upon them. Topics include: rocks and minerals, the structure of the earth, plate tectonics, land forms. Three lectures and a laboratory.
Course Attribute(s): CLAS: (F-I) Scientific Inquiry, CLAS: (F1) Nat Sci w/Lab, CoB: Natural Science

GEOL 103 - Earthquakes and Volcanoes 4 hours. This course reviews what is presently known about earthquakes and volcanoes, investigates ways to reduce loss of life and property, and explores some current research which may lead to a better understanding of these violent natural events.
Course Attribute(s): CLAS: (F-II) Scientifc Knowldg, CLAS: (F2) Nat Sci-no Lab, CoB: Natural Science

GEOL 104 - Earth and Life through Time 4 hours. An introduction to the history of the earth and life on it, and to the techniques for "reading" these from the rock record. Topics include geologic time, sedimentary rocks and depositional environments, fossils, ancient and recent geologic events and the evolution of life. Three lectures and a laboratory.
Course Attribute(s): CLAS: (F-I) Scientific Inquiry, CLAS: (F1) Nat Sci w/Lab, CoB: Natural Science

GEOL 106 - Elementary Oceanography 4 hours. A study of the major contemporary concepts of biological, chemical, geological, and physical oceanography. The nature and origin of ocean basins, sea water composition, water masses, oceanic circulation, waves, tides, marine ecology, biological productivity, sedimentation, and plate tectonic theory are discussed.
Course Attribute(s): CLAS: (F-II) Scientifc Knowldg, CLAS: (F2) Nat Sci-no Lab, CoB: Natural Science

GEOL 110 - Lunar Geology 2 hours. Naked eye observations permit us to understand why the Moon appears where it does in the sky, how its appearance changes, and how it affects things on Earth. This course studies these data using computers, personal observations and models.
Course Attribute(s): CLAS: (F-I) Scientific Inquiry, CLAS: (F2) Nat Sci-no Lab, CoB: Natural Science

GEOL 200 - Special Topics in Geology 1-4 hours. This course discusses topics of either general or specific nature not covered in detail in other 100 or 200-level courses, for example the evolution and extinction of the dinosaurs. (Sufficient demand)

GEOL 201 - Surficial Geology 4 hours. In this study of the earth's surface materials, major topics include weathering and soil formation, glacial deposits, aeolian deposits, surface water hydrogeology and related geomorphology. Three lectures and one laboratory per week. Prerequisite: One of GEOL 101, GEOL 104, ENVS 101; or permission of instructor.
Course Attribute(s): CoB: Natural Science

GEOL 206 - Fieldcraft-Outdoor Proficiency 4 hours. This course helps students acquire basic skills to 1) use field tools and 2) build habits essential to the study of environmental and geological sciences. Topics include note taking, map reading, navigation, data collection and data sharing. Prerequisite: One Geology or Environmental Studies course plus permission of instructor. (Cross-listed as ENVS 206)

GEOL 301 - Structural Geology 4 hours. Students learn how to recognize deformational features such as folds, faults, joints and dikes; how to, correlate these with three dimensional geometric techniques such as folding lines and stereographic nets; and how to derive from these features the important tectonic parameters active at the time of their formation: maximum stress direction, principal stress differences, confining pressure and strain rate. Prerequisite: one geology course.
Course Attribute(s): CoB: Natural Science

GEOL 302 - Mineralogy and Petrology 4 hours. Description, classification, and genetic interpretation of the rock forming minerals and the igneous and metamorphic rocks which are formed from them. Focus will be on mineral and rock associations in space and time, with emphasis on tectonic and environmental interpretations. Prerequisite: one 100-level geology course or permission of instructor.
Course Attribute(s): CoB: Natural Science

GEOL 307 - Stratigraphy and Sedimentation 4 hours. The chemical and physical processes leading to weathering, erosion, transport, deposition, lithification and alteration of sediments are considered along with the economic aspects of sedimentary rocks, such as the occurrence of oil, natural gas, and coal. Prerequisite: one geology course or permission of instructor.
Course Attribute(s): CoB: Natural Science
GEOL 400 - Special Topics in Geology 1-4 hours. A discussion of topics appropriate to current geological phenomena, including such topics as environmental geochemistry or economic geology. (Sufficient demand)

GEOL 408 - Tectonics 4 hours. The formation and evolution of cratons, rifts, Atlantic type margins, shear zones and island arcs are discussed in this course. A detailed study is made of the geological structure and history of the Appalachians, Rockies, Alps and Himalayas. (Alternate years)
Course Attribute(s): CoB: Natural Science

GEOL 414 - Geophysics 4 hours. A study of the structure and evolution of the solid earth using information derived from geophysical investigations. The shape of the earth, its gravity, magnetic field, thermal and rheological characteristics as well as the gravitational fields are used to impose constraints on possible models of the planet. (Alternate years)
Course Attribute(s): CoB: Natural Science

GEOL 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

GEOL 464 - Hydrogeology 4 hours. An examination of the hydrologic system as a whole and in parts. Emphasis is on subsurface water and hydrogeochemistry. Additional topics may include water use and management, water pollution, and flood control. Laboratories emphasize field and laboratory techniques of water quality and quantity analysis. Prerequisite: GEOL 201 or permission of instructor.
Course Attribute(s): CoB: Natural Science

Gerontology
GERO 118 - Introduction to Adult Development and Aging 4 hours. This course examines adulthood and aging from a biopsychosocial perspective. Topics include research methodology in adulthood; theories of normal aging, physical and environmental influences on adult development; diseases and disorders associated with aging; changes in cognition; intelligence and wisdom; gender and minority issues in aging; issues regarding death and dying. It also challenges popular misconceptions about aging. (Cross-listed as PSYC 118, SJST 118)
Course Attribute(s): CLAS: (E1) Social Sci-Psyc, CoB: Social Science

GERO 300 - Special Topics in Gerontology 2-4 hours. A series of directed readings on special topics, changing from semester to semester. Through a combination of reading, seminar feedback, and guest lectures, students are able to explore areas of special interest in greater depth. Prerequisite: PSYC 101. Recommended GERO 118 or permission.

GERO 429 - Cognition and Aging 2 hours. A lecture and discussion course covering current research and theories of cognitive processes in the older adult. Basic topics include age differences in memory, verbal processes, motor performance, perception, problem solving, and intelligence. Prerequisite: PSYC 101. Recommended: PSYC 332 or GERO 118 or permission of instructor. (Cross-listed as PSYC 429) (Alternate years)
Course Attribute(s): CoB: Social Science

GERO 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

GERO 485 - Gerontology Internship 4 hours. Field work associated with federal, state or local agencies for the aging, or with social service, health care, legal, recreational or residential facilities primarily serving older adults. Supervision provided jointly by agency personnel and the instructor. At least 6 hours per week in a field placement is expected. Prerequisites: Senior Gerontology major and permission of instructor.

Global Studies
GLBS 101 - Introduction to Global Studies 4 hours. This course introduces students to an overview of contemporary human patterns from geographic, environmental, linguistic, socio-cultural, religious, political, and economic perspectives. From this global framework, students learn to communicate (and think) across cultures.
Course Attribute(s): AU: Global Perspective, CLAS: (E3) Soc Sci-Soc/Anth, CoB: Social Science, SoAD: Humanities-'Other'

GLBS 200 - Special Topics 1-4 hours. An open course, varying in content from year to year, which allows for concentration in specialized areas. (Sufficient demand)

GLBS 210 - Global Perspectives: Paris 2 hours. This course enables students to develop an understanding and appreciation of another culture, first in the classroom, and then two weeks in Paris. The focus is on history, art, and contemporary culture. Open to all students. (Cross-listed as ARTH 210, FREN 210)
Course Attribute(s): AU: Global Perspective, AU: Travel Courses, CoB: Humanities

GLBS 213 - Speaking the Unspeakable: Argentina's Literature of Dictatorship 4 hours. This course introduces literary representations of state violence and resistance during the Argentine military dictatorship of the 1970s and 1980s. We engage in close readings of a variety of literary genres, including novels, short stories, autobiography, and testimonial literature. We combine literary readings with study of historical and theoretical texts in order to deepen our understanding of state terrorism, resistance, trauma, memory, and justice. The course is conducted in English, including the readings and films. (Cross-listed as SJST 213, SPAN 213)
Course Attribute(s): AU: Global Perspective, CLAS: (A) Literature, CoB: Social Science

GLBS 216 - Cuba Close Up: Film since the Revolution 4 hours. 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. (Cross-listed as SPAN 216, WGST 216)
Course Attribute(s): AU: Global Perspective, CLAS: (C) The Arts

GLBS 221 - Pop Culture Goes Global 4 hours. This course examines U.S. popular culture and the media and their sociological, economic and political influence on cultures at home and abroad. It offers students a deeper understanding of globalization and its effect on their lives. (Every year; Fall) (Cross-listed as COMM 221)
Course Attribute(s): AU: Global Perspective, CoB: Social Science

GLBS 300 - Special Topics 1-4 hours. An open course, varying in content from year to year, which allows for concentration in specialized areas. (Sufficient demand)

GLBS 306 - Arts of Japan 4 hours. This course is an introduction to Japanese visual arts, material culture, and architecture from prehistory to the present. Major monuments of Japan are analyzed according to their historical, social, and religious contexts. A field trip to study objects in the Johnson Museum Collection at Cornell University is part of the course. (Cross-listed as ARTH 306)

GLBS 307 - East Asian Design and Material Culture 4 hours. This course is a survey of ceramics, wood, metalwork, textiles and product design from the 15th century to the present in China, Korea and Japan. Emphasis is on aesthetics, production systems, social worlds and craft discourse. (Cross-listed as ARTH 307) (Offered Fall, odd years)

GLBS 315 - Understanding Global Media and Cultural Change 4 hours. In this course students analyze global media (news and entertainment) in order to better understand how global media messages influence societies and audiences worldwide. Students also develop an understanding of how to create their own objective and persuasive global media messages. (Cross-listed as COMM 315) (Every other year; Spring)
Course Attribute(s): AU: Global Perspective, CoB: Social Science

GLBS 323 - The History of Stuff 4 hours. In this class we learn about the history of everyday commodities around us and how they transformed human civilization: how silver revolutionized global trade, how coffee helped create the public sphere, how rubber led to mass murder and how cocaine figures in transnational organized crime, and more. (Cross-listed as HIST 323)
Course Attribute(s): CoB: Humanities

GLBS 325 - Global Communication 4 hours. Global Communication introduces students to communication and media issues impacting the global community in the digital age, including: international telecommunication networks, transnational media corporations (based in America, Asia, the Middle East, etc.), global news, global advertising, the Internet and information flow. Prerequisite: COMM 110 or permission of instructor. (Cross-listed as COMM 325)
Course Attribute(s): AU: Global Perspective

GLBS 351 - European Politics 4 hours. From post-WWII attempts to prevent future conflicts has grown a unique political structure called the European Union. This course analyzes the political institutions and political culture of both the European Union and some important countries making up the EU. (Cross-listed as POLS 351)
Course Attribute(s): AU: Global Perspective, CoB: Social Science

GLBS 400 - Special Topics 1-4 hours. An open course, varying in content from year to year, which allows for concentration in specialized areas. (Sufficient demand)

GLBS 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

GLBS 466 - Histories of Photography in the Non-Western World 4 hours. This seminar focuses on how photography and its modern modes of vision were disseminated and adapted around the globe since its 1839 invention in Europe. The course is designed as a research lab: students develop both a short written report and related visual project. (Cross-listed as ARTH 466)
Course Attribute(s): AU: Global Perspective

GLBS 495 - Global Issues Seminar 4 hours. This integrative capstone course allows seniors to study a variety of global issues in-depth and to present the results of their own particular global experiences and studies. Topics examined will vary from year to year. The seminar may be focused on a central theme or on a variety of issues, depending upon the students' international interests and the instructor's discretion. Prerequisites: GLBS 101; Study Abroad; senior standing. (Cross-listed as ANTH 495 and SOCI 495)
Course Attribute(s): AU: Global Perspective, CoB: Social Science

German
GRMN 101 - German I 4 hours. Introduction to the language and culture of the German-speaking world. Development of skills in 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 GRMN 102 or the equivalent.
Course Attribute(s): CLAS: (02) Foreign Language, CoB: Humanities

GRMN 102 - German II 4 hours. This course builds on German I, increasing students' communicative skills and exploration of German-speaking cultures. Students improve their proficiency in speaking, listening, writing and reading German through engaging in class activities and with independent work. Students learn to perform practical tasks like ordering in restaurants, dressing, visiting others, and making living arrangements. Prerequisite: GRMN 101, 41-60% on German Language Placement Exam, or permission of instructor.
Course Attribute(s): CLAS: (02) Foreign Language, CoB: Humanities

GRMN 200 - Special Topics in German 1-4 hours. Content varies from year to year.
Course Attribute(s): CoB: Humanities

GRMN 400 - Special Topics 1-4 hours. Special topics may include: Literature and Film of the former GDR, History of the German Language, German Literature of the Renaissance, Contemporary Writers in the German-speaking World, Minority Writers in Germany, and The History of Jews in Germany. Readings, discussions and assignments are in German. Prerequisite: 300-level German course or permission of instructor.

GRMN 450 - Independent Study 1-4 hours. For students with a particular interest in an aspect of German language, culture or literature not covered in any established course. A 4-hour independent study is required of German majors. Approved Plan of Study required.

GRMN 485 - Internship in German 1-4 hours. An off-campus project in consultation with faculty in the Division of Modern Languages. Students gain experience in a variety of careers involving German and related fields. The internship must be conducted in German. Requirements for this project include a journal, job evaluations, and a final report. May be taken during the summer or semester abroad. GRMN 202 or equivalent proficiency recommended.
Course Attribute(s): AU: Global Perspective

Health Fitness Management
HFMT 200 - Special Topics in HFMT 1-4 hours. Topics of interest are offered. Topics vary term to term.

HFMT 305 - Field Experience in Health Fitness Management 1 hour. This course serves to allow students to apply theory discussed in the classroom in a practical setting similar to that in which they have interest in working. Students spend time observing and/or assisting professionals in a professional setting as assigned by the instructor.

HFMT 405 - Program Design and Implementation in Health Fitness Management 3 hours. This course applies principles learned in prior courses to more advanced concepts, including power lifting, agility, and plyometrics techniques, while investigating emerging concepts in strength training and fitness. Concepts learned in lecture are applied in the lab setting. Prerequisites: BIOL 208, ATHT 111, ATHT 190.

HFMT 410 - Exercise Prescription 4 hours. In this course we take a "hands-on approach" that applies basic exercise testing principles of cardiovascular fitness, muscular strength and endurance, flexibility, nutrition, and body composition to specific populations. Different screening and testing devices, along with psychological health/mentality pertaining to exercise, are investigated. Prerequisites: BIOL 208, ATHT 111, ATHT 392.

HFMT 420 - Special Populations and Health Appraisal 2 hours. This course is designed to provide students with the understanding of exercise and conditioning as they relate to special populations. Content includes: identifying factors of special populations; risk factors associated with special populations, guidelines for exercise test administration, and the principles of exercise prescription for special populations ranging from cancer patients to pregnancy. Prerequisite: BIOL 208 and ATHT 432.

HFMT 485 - Internship 3 hours. This course is designed to allow students to apply theory, concepts, and competencies discussed in the classroom to real situations in a professional setting. A variety of sites, depending on the career goal of the student, may be chosen. Prerequisite: Senior standing; HFMT 305.

HFMT 490 - Senior Seminar 1 hour. This course provides education focusing on preparing the Health Fitness Professional, including health fitness management students, for potential certification exams (NSCA, ACSM, NASM, etc.), graduate school/job applications, and career development issues. A variety of learning techniques, such as exam simulations, mock interviews, and practical application of skills, are emphasized as the student transitions from student to professional. Prerequisite: Senior standing.

HFMT 495 - Health Promotion Program Design 2 hours. The focus of this course is the promotion of healthcare, healthy living, and health-related programs to various populations. Depending upon the population being served, healthcare and/or health lifestyle needs may differ and require specific programming. Topics of discussion include current national and regional health lifestyle trends and what type of programming may best serve specific populations. This course looks into the design of programs that best fill these needs. Prerequisite: Senior standing.

History
HIST 107 - The World in the 20th Century 4 hours. Surveys political, social, economic, and intellectual movements shaping twentieth century states and peoples. Special attention is devoted to the decline of European hegemony, the rise of the United States, and the evolution of "emerging" nations in Asia, Africa, and the Americas.
Course Attribute(s): AU: Global Perspective, CLAS: (D) Historical Studies, CoB: Humanities, SoAD: Humanities-Area B or D

HIST 111 - Modern Western History 4 hours. A survey of developments in Europe and the Western Hemisphere since the 1500s, with emphasis on the impact of ideas and ideologies (including Fascism, Nazism, and Communism), social and economic change (including industrialism), revolutions and world wars, and imperialism.
Course Attribute(s): AU: Global Perspective, CLAS: (D) Historical Studies, CoB: Humanities, SoAD: Humanities-Area B or D

HIST 120 - The Ancient Mediterranean 4 hours. Survey of civilizations that helped shape modern-day Eurasia and North Africa - Mesopotamia, Egypt, Minoan Crete, Israel, Greece, Persia, and Rome. Emphasis on the interaction of these cultures around the Mediterranean Sea. Evaluation based on short papers, exams and quizzes, and participation.
Course Attribute(s): BFA: non-American Hist, CLAS: (D) Historical Studies, CoB: Humanities, SoAD: Humanities-Area B or D

HIST 121 - Medieval Cultures 4 hours. Exploration of the three dominant cultures of the medieval period: Europe, the Byzantine Empire, and the Islamic world, with a special focus on their interactions.
Course Attribute(s): BFA: non-American Hist, CLAS: (D) Historical Studies, CoB: Humanities, SoAD: Humanities-Area B or D

HIST 152 - The Spectacular Spanish Empire: Rise, Decline, Influence 4 hours. "Spectacular" and "fascinating" have been used to describe the largest empire ever to exist. Covering ca. 1492-1975, this course traces Spain's "rise and fall" while examining developments in nationalism and imperialism in Europe and in the Americas, Topics include politics, culture, and Spain's legacy in the modern world.
Course Attribute(s): CLAS: (D) Historical Studies, CoB: Humanities, SoAD: Humanities-Area B or D

HIST 200 - Topics in History 1-4 hours. A historical examination of issues in history. Topics will vary each time the course is offered. (Sufficient demand)
Course Attribute(s): CoB: Humanities

HIST 211 - American History I 4 hours. American history from Jamestown to the Civil War with particular attention to the political, social, and economic development of the new nation.
Course Attribute(s): CLAS: (D) Historical Studies, CoB: Humanities, SoAD: Humanities-Area B or D

HIST 212 - American History II 4 hours. American life from the Civil War to the present with particular attention to the transformation from a rural to an urban society, movements for social reform, and the further extension of civil and political rights. Can be taken as a continuation of HIST 211 or may be taken independently.
Course Attribute(s): CLAS: (D) Historical Studies, CoB: Humanities, SoAD: Humanities-Area B or D

HIST 223 - Survey of German History 4 hours. This course offers a survey of German history from the earliest evidence of the Germanic tribes through developments in the last decade in Germany.
Course Attribute(s): CLAS: (D) Historical Studies, CoB: Humanities, SoAD: Humanities-'Other'

HIST 300 - Topics in History/Non-American 1-4 hours. Studies of different non-American historical themes, with topics varying each time the course is given.
Course Attribute(s): CoB: Humanities

HIST 301 - America in War during the 20th Century 4 hours. With reference to both World Wars, Korea, Vietnam, and the Gulf War, the course addresses origins, strategy and leadership, political and social effects, and moral and legal issues including the army code of conduct, Hiroshima, the Nuremburg Trials, and Mylai. (Alternate years)
Course Attribute(s): AU: Global Perspective, CoB: Humanities

HIST 303 - The Civil War Era: 1830-1877 4 hours. A study of the War Between the States, including analyses of the political, social, economic, and ideological differences between the sections; the war and its aftermath; the historiography of the war: and an evaluation of the traditional view of the war as the "watershed" of American history. (Offered Alternate years)
Course Attribute(s): CoB: Humanities

HIST 307 - Post-World War II America 4 hours. This course is a historical survey of domestic events since World War II with particular attention to the fate of the New Deal, McCarthyism, the Kennedy legacy, the impact of Vietnam, and the civil rights and women's movements. (Cross-listed as SJST 307)
Course Attribute(s): CoB: Humanities

HIST 308 - Americans and Their Environments 4 hours. An inquiry into Americans' attitudes toward and relationships to environments they encounter and create, ca. 1600 - present. Topics include "Nature," industrialization, fine arts and architecture, government and citizen actions, and the impact of the U. S. on global resources.
Course Attribute(s): CoB: Humanities

HIST 309 - Israelis, Arabs and American Foreign Policy 2 hours. A historical survey of the Arab-Israeli conflict from the nineteenth-century beginnings of Zionism to the Second Intifada, with special attention to the role played by the USA.
Course Attribute(s): CoB: Humanities

HIST 310 - The Ancient Greeks 4 hours. The origins, growth and development of the Greek world from Mycenean through Hellenistic times (12th-1st centuries, B.C.E.), with topics such as the Homeric myths, Sparta, Athens, democracy, the polis, the Hellenistic world. (Alternate years)
Course Attribute(s): CoB: Humanities

HIST 311 - The Roman World 4 hours. Rome from a river village to an empire (5th century B.C. - 3rd century A.D.), including its traditional origins, Etruscan control, republicanism, social conflict, imperialism, Julius Caesar, Antony and Cleopatra, Augustus and Nero, imperial life and livelihood. (Alternate years)
Course Attribute(s): CoB: Humanities

HIST 312 - Early Medieval Europe, 400-1050 4 hours. This course covers European history from the end of the Roman Empire to the beginning of feudal society. Through reading, lectures and discussions, students discover that the "Dark Ages" were actually filled with activity and innovation. (Alternate years)

HIST 321 - The History of Fascism 4 hours. This course is a study of the history of fascism. We examine the origins of fascist ideas and organizations; the varieties of fascist organizations and beliefs in Europe and European colonies; and the impact of fascism on politics and society before, during and after the Second World War. (Cross-listed as POLS 321)
Course Attribute(s): AU: Global Perspective, CoB: Humanities

HIST 322 - Churchill, Stalin, Roosevelt, Hitler 2 hours. A biographical approach to the Great Depression and World War II period.
Course Attribute(s): AU: Global Perspective, CoB: Humanities

HIST 323 - The History of Stuff 4 hours. In this class we learn about the history of everyday commodities around us and how they transformed human civilization: how silver revolutionized global trade, how coffee helped create the public sphere, how rubber led to mass murder and how cocaine figures in transnational organized crime, and more. (Cross-listed as GLBS 323)
Course Attribute(s): CoB: Humanities

HIST 324 - Queer American History 4 hours. What is queer history? Why write it? Who should be included? This course addresses the possible content and theoretical issues in the study of lesbian, gay, bisexual, and trans people in America since the seventeenth century. Prerequisite: sophomore standing or permission of instructor. (Cross-listed as WGST 324)

Course Attribute(s): CoB: Humanities

HIST 326 - The Modern Middle East and North Africa 4 hours. This course offers an overview of the modern history of the Middle East and North Africa. Topics include the end of the Ottoman Empire, the Nahda or cultural renaissance, colonialism and decolonization, Arab cinema and art, the petroleum industry and OPEC, the Israeli-Palestinian conflict, the Islamic Revolution in Iran, and more.
Course Attribute(s): AU: Global Perspective

HIST 327 - Propaganda: Persuasion, Art and War 4 hours. Is propaganda the opposite of knowledge, or one of the means for its dissemination? In this course we examine the development of propaganda, or mass persuasion. Topics include art, contemporary media, public relations and war.
Course Attribute(s): AU: Global Perspective

HIST 328 - Visions of Modernity: Art, Politics and Ideas 4 hours. This course is a history of the “big ideas”” of our modern era and how they define our lives. We examine foundational works in psychoanalysis, art and cinematic theory, Existentialism, postcolonial theory and deconstruction. (Cross-listed as PHIL 328)
Course Attribute(s): CoB: Humanities

HIST 329 - Revolution and Culture: Hegel, Marx, Nietzsche 4 hours. An in-depth study of major texts by Hegel, Marx, and Nietzsche, with a thematic focus on the nature of historical change, the interpretation of history, and the relationship between material life and culture, including religion, philosophy, politics, and morality. (Cross-listed as PHIL 329, POLS 329)
Course Attribute(s): CoB: Humanities

HIST 360 - Topics in History/American 1-4 hours. Studies of different American historical themes, with topics varying each time the course is given.

HIST 372 - America as a World Power, 1898-Present 4 hours. American diplomacy in the age of mass production, world wars, fascism and communism including close scrutiny of the conflict between isolationism and internationalism. (Alternate years)
Course Attribute(s): CoB: Humanities

HIST 375 - The Creation of American Culture 4 hours. An examination of the dynamics of both "serious" and "popular," culture in nineteenth century America, with specific attention to their interaction, as well as to the relationships between the developing political/social ideology and the creative activity of the era. (Alternate years)
Course Attribute(s): CoB: Humanities

HIST 377 - History of American Slavery 2 hours. A history of American slavery and race relations from the 17th century until emancipation. (Sufficient demand)
Course Attribute(s): CoB: Humanities

HIST 382 - Latin American Politics 4 hours. After a brief review of the region's colonial and 19th-century political histories, this course focuses on the changing patterns of modern politics in leading Latin American countries, from "oligarchical" plutocracy to mass-based populism and socialist revolution, from repressive military authoritarianism to more recently established models of representative and participatory democracy. (Cross-listed as POLS 382)
Course Attribute(s): AU: Global Perspective, CoB: Social Science

HIST 383 - The Nazi Holocaust 2 hours. This course will cover a number of topics, including German anti-Semitism and the means by which Hitler engineered the Final Solution. Half the course will focus on the Nazis, the other half on their victims. It concludes with a discussion of Holocaust "denial" and the nature of evil.
Course Attribute(s): AU: Global Perspective, CoB: Humanities

HIST 385 - Internship in History 1-4 hours. Internship under supervision. Available irregularly.

HIST 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

Individually Structured Major
ISM 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course by the student in the Individually Structured Major program, under supervision of the student's ISM board. Approved Plan of Study required.

ISM 495 - Baccalaureate Project 4-6 hours. Senior project within the Individually Structured Major Program under supervision of the student's Advisory Board. Prerequisite: Permission of Advisory Board Chair.

Italian
ITAL 101 - Italian I 4 hours. Introduction to the language and culture of the Italian-speaking world; speaking, reading, understanding, and writing. Practice in language lab. Emphasis on communicative skills. Assumes no prior knowledge of the language. Offered upon availability of instructor. Not open to students with credit in ITAL 102 or the equivalent. (Offered on demand)
Course Attribute(s): CLAS: (02) Foreign Language, CoB: Humanities

ITAL 102 - Italian II 4 hours. This course builds on Italian I, increasing students' communicative skills and exploration of Italian-speaking cultures. Students improve their proficiency in speaking, listening, writing and reading Italian through engaging in class activities, in the language lab and with independent work. Students learn to perform practical tasks like ordering in restaurants, dressing, visiting others, and making living arrangements. Prerequisite: ITAL 101 or permission of instructor. Offered upon availability of instructor. (Offered on demand.)
Course Attribute(s): CLAS: (02) Foreign Language, CoB: Humanities

ITAL 200 - Special Topics in Italian 1-4 hours. Content varies from year to year. Prerequisite: ITAL 102 or permission of instructor.

ITAL 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

Latin
LATN 101 - Latin I 4 hours. An Introduction to the Latin language. This course includes an introduction to basic Latin

grammar as well as short reading passages. The focus of this course will be on classical Latin. There will be some emphasis on pronunciation and spoken Latin. There will be readings in English on both the history of Latin as an Indo-European language as well as on Roman history.
Course Attribute(s): CLAS: (02) Foreign Language, CoB: Humanities

LATN 102 - Latin II 4 hours. This course builds on introductory Latin I. Students explore the history and cultures of the Roman Empire as well as the roots of English. Students improve their proficiency in reading and writing Latin through engaging in class activities and independent work. Prerequisite: LATN 101 or permission of instructor.
Course Attribute(s): CLAS: (02) Foreign Language, CoB: Humanities

LATN 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

Mathematics
MATH 100 - Special Topics in Mathematics 1-4 hours.

MATH 101 - Communicating with Numbers 4 hours. Topics include ratios and proportions, proportionality as distinct from proportions, constant of proportionality, rates, percentages, total change vs. percent change, and handling data.
Course Attribute(s): CLAS: (03) Quant Reasoning, CoB: Quant Reasoning

MATH 102 - Mathematics for Teachers: Grades K-6 4 hours. This is a content course for those preparing to teach Kindergarten through Grade 6. This course prepares candidates with the knowledge base to teach math in accordance with the State learning standards as prescribed by NYSED regulations. Topics include: Mathematical language and vocabulary, equivalent forms, mathematical equations, graphing and diagrams.
Course Attribute(s): CLAS: (03) Quant Reasoning, CoB: Quant Reasoning

MATH 104 - Quantitative Methods for Business 4 hours. An introduction to the quantitative methods needed by students in business-related majors. Topics covered include equations and graphs, functions, and systems of equations.
Course Attribute(s): CLAS: (03) Quant Reasoning, CoB: Quant Reasoning

MATH 151 - Calculus I 4 hours. An introduction to differentiation and integration of functions of a single variable, with applications. Four years of college preparatory mathematics strongly recommended. Not open to students with credit in MATH 152.
Course Attribute(s): CLAS: (03) Quant Reasoning, CoB: Quant Reasoning

MATH 152 - Calculus II 4 hours. A continuation of single variable calculus including transcendental functions, methods of integration, and series. Prerequisite MATH 151. Not open to students with credit in MATH 253.

MATH 200 - Topics in Mathematics 1-4 hours. Special topics in mathematics which vary from year to year. (Sufficient demand)

MATH 231 - Introduction to Data Science 4 hours. Students are introduced to the central ideas used in data science. Topics include supervised and unsupervised algorithms in regression, classification, and clustering problems; probabilistic results such as bias-variance trade-off and sampling variability; and ensemble methods. Concepts are explored and interpreted using a common statistical programming language such as Python or R. Prerequisite: MATH 151. (Offered Spring; odd years)

MATH 250 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Written Plan of Study required. Open to qualified students.

MATH 253 - Calculus III 4 hours. Multivariate calculus, derivatives and integrals of vector functions with Stoke's and Green's theorems. Prerequisite: MATH 152.

MATH 271 - Differential Equations 3 hours. Ordinary differential equations with applications to the sciences. Prerequisite: MATH 253.

MATH 281 - Foundations of Higher Mathematics 4 hours. An introduction to logic and proof: Topics include sets, symbolic and predicate logic, inductions, and cardinality. Prerequisite: MATH 253.

MATH 305 - Computational Theory 4 hours. This course studies computational theory in the context of theoretical computer science and mathematics. Topics include finite automata and languages, computability and Turing machines, decidability and incompleteness theorems. Prerequisite: MATH 281. (Cross-listed as CSCI 305) (Offered Fall, odd years)

MATH 331 - Mathematics from a Historical Perspective 3 or 4 hours. This course explores a wide variety of topics in the history of mathematics, from the development of numeral systems to the structure of the modern mathematical community. Many of these topics are explored through the many heroes of mathematics. Prerequisites: MATH 253; ENGL 102 or ENGR 110.

MATH 351 - Introduction to Operations Research 4 hours. Optimization techniques with application to decision making. Linear programming and other topics, e.g., network analysis, dynamic programming, game theory, stochastic processes, queueing theory.

MATH 371 - Linear Algebra 4 hours. The concepts of vector space, independence, basis and linear transformations, with applications to systems of linear equations, eigenvalue problems and bilinear and quadratic forms. Prerequisite: MATH 253.

MATH 381 - Mathematical Statistics 4 hours. The theoretical basis for statistics including probability, random variables, expectation, a curve of important probability distributions, sums of independent random variables, and confidence intervals. Prerequisite: MATH 253.

MATH 382 - Actuarial Exam Preparation 1 hour. The content includes definitions and applications in risk management and

insurance using calculus-based probability theory. Taken in preparation for the Society of Actuaries Exam P/Casualty Actuarial Society Course 1 exam. Corequisite: MATH 391.

MATH 391 - Statistical Methods 3 hours. This course introduces statistical inference and is a study of different methods of statistical estimation and tests of statistical hypotheses. Prerequisite: MATH 381.

MATH 400 - Topics in Mathematics 1-4 hours. Special topics in mathematics which vary from year to year. (Sufficient demand)

MATH 401 - Advanced Engineering Mathematics 4 hours. Fundamental concepts of applied analysis including Fourier series and integrals, Laplace transforms, partial differential equations and boundary value problems and special functions. Prerequisite: MATH 271.

MATH 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required, which must include the student reading and producing proofs. Open to qualified third and fourth year students, MATH 450 is required of all candidates for departmental honors.

MATH 461 - Geometry 4 hours. An introduction to both Euclidian and non-Euclidian geometry, with emphasis on the axiomatic method and its place in the current secondary mathematics curriculum. Prerequisite: MATH 253.

MATH 481 - Modern Algebra 4 hours. The fundamental structures and techniques of algebra including topics such as groups, rings, fields, quotient structures, theory of equations and polynomials. Prerequisite: MATH 281.

MATH 491 - Advanced Calculus 4 hours. Elements of real function theory including some notions from logic, the topology of the real line, continuity, uniform continuity, differentiation and limits of sequences. Prerequisite: MATH 281.

Philosophy

PHIL 101 - Introduction to Philosophy 4 hours. This course provides students who have had little or no acquaintance with philosophy with a workable knowledge of philosophical language and familiarity with its method.
Course Attribute(s): CLAS: (B) Philos/Relig Studies, CoB: Humanities, SoAD: Humanities-Area B or D

PHIL 105 - Human Nature and the Cosmos: Western and non-Western Perspective 4 hours. Discussions of human nature and the nature of the cosmos are central to the philosophies and world views of all cultures. This introductory philosophy course is based on this recognition. Students read selected sources on and from Europe, the Mediterranean, Asia, Africa and the Americas.
Course Attribute(s): CLAS: (B) Philos/Relig Studies, CoB: Humanities, SoAD: Humanities-Area B or D

PHIL 201 - Existentialism 4 hours. An elementary study of the interpretation of human existence by selected existentialist thinkers. (Sufficient demand)
Course Attribute(s): CLAS: (B) Philos/Relig Studies, CoB: Humanities, SoAD: Humanities-Area B or D

PHIL 202 - The Meaning of Life 4 hours. In this course we look at how various thinkers and philosophical schools have tried to answer questions about what makes life meaningful.
Course Attribute(s): CLAS: (B) Philos/Relig Studies, CoB: Humanities, SoAD: Humanities-Area B or D

PHIL 281 - Ethics 4 hours. An attempt to understand the fundamental human alternatives in the wake of the moral skepticism of our age. Traditional answers to the question "What is the good life?" will be examined by reading selected philosophers from Plato to Sartre.
Course Attribute(s): CLAS: (B) Philos/Relig Studies, CoB: Humanities, SoAD: Humanities-Area B or D

PHIL 282 - Introduction to Logic 4 hours. Standard propositional logic, quantifier logic, and informal fallacies. Logical concepts are compared with some concepts of the English language. Discusses the nature of formal systems and emphasizes the development of proof techniques. Recommended for pre-law students.
Course Attribute(s): CLAS: (03) Quant Reasoning, CoB: Humanities

PHIL 283 - Philosophy of the Arts I 4 hours. Conceptual analysis of the arts and what they reveal about human existence. Emphasis is placed on questions about creativity and meaning. Topics include representation and truth, expression, art and language, and the nature of cultural regularities. Special emphasis on the rise of modernism and formalism.
Course Attribute(s): CLAS: (B) Philos/Relig Studies, CoB: Humanities, SoAD: Humanities-Area B or D

PHIL 300 - Topics in Philosophy 1-4 hours. Varying topics from year to year are selected from either the history of philosophy or contemporary philosophic problems. Prerequisites vary depending on the topic. (Sufficient demand)

PHIL 304 - Equality 2 hours. Equality is a core concept in contemporary philosophy and in discussions of social justice generally. In this course we discuss different kinds of equality: equality of opportunity, racial equality, sexual equality and political equality. Previous coursework in political science or philosophy is desirable but not required. (Cross-listed as POLS 304, SJST 304)
Course Attribute(s): CoB: Humanities

PHIL 305 - Chinese Philosophy 4 hours. What is virtue? Does good government flow from the character of leaders or is strict law enforcement all that is required? Alternatively, does our concern with society and government distract us from more important things? Is the concern for enlightenment inherently selfish? Readings in classical and more recent Chinese philosophy will help us grapple with these questions. Prerequisite: previous coursework in philosophy or religious studies, or permission of the instructor.
Course Attribute(s): CoB: Humanities

PHIL 306 - Personal Identity and the Self 2 hours. What constitutes a person’s identity and what is the self? Does being the same person over time mean having the same body or is psychological continuity required? If it is psychological, then is it acquired and can it be lost? Finally, is there a self? What we learn from medical science, psychology and philosophy are brought together in this discussion. Prerequisite: previous course

work in philosophy, psychology or permission of the instructor. (Cross-listed as PSYC 306)
Course Attribute(s): CoB: Humanities

PHIL 309 - Philosophical Psychology 4 hours. Logical analysis of concepts about the mind, emphasizing problems of meaning for such terms as sensation, imagination, emotion, memory, dreams, intention, belief, reason, motivation, consciousness and personal identity. Methods of psychological explanation are also studied. (Sufficient demand) (Cross-listed as PSYC 309)
Course Attribute(s): CoB: Humanities

PHIL 310 - Animal Consciousness 2 or 4 hours. This course is an examination of the nature of consciousness through discussion of the issues raised by the cognition and consciousness of non-human animals. Prerequisite: completion of at least one philosophy course or permission of instructor.
Course Attribute(s): CoB: Humanities

PHIL 311 - Greek Philosophy 4 hours. This course covers the history of Greek philosophy from the Presocratic through the Hellenistic period. Special emphasis is given to Plato and to Aristotle. (Cross-listed as POLS 311)
Course Attribute(s): CoB: Humanities

PHIL 312 - Modern Philosophy 4 hours. The history of European Philosophy during the l7th and 18th centuries. Examines figures whose thought reflects the rise of modern science and the emergence of the modern state. Emphasis given to such thinkers as Hobbes, Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, and Kant. (Alternate years)
Course Attribute(s): CoB: Humanities

PHIL 328 - Visions of Modernity: Art, Politics and Ideas 4 hours. This course is a history of the "big ideas" of our modern era and how they define our lives. We examine foundational works in psychoanalysis, art and cinematic theory, Existentialism, postcolonial theory and deconstruction. (Cross-listed as HIST 328)
Course Attribute(s): CoB: Humanities

PHIL 329 - Revolution and Culture: Hegel, Marx, Nietzsche 4 hours. An in-depth study of major texts by Hegel, Marx, and Nietzsche, with a thematic focus on the nature of historical change, the interpretation of history, and the relationship between material life and culture, including religion, philosophy, politics, and morality. (Cross-listed as HIST 329, POLS 329)
Course Attribute(s): CoB: Humanities

PHIL 341 - Modern Political Theory 4 hours. This course is a survey of the major political theorists from the Renaissance through the twentieth century, with primary emphasis on western thinkers. Particular attention is given to theory as an historical and cultural phenomenon. (Cross-listed as POLS 341, SJST 341)
Course Attribute(s): CoB: Social Science

PHIL 383 - Philosophy of the Arts II 4 hours. Continued study of the question of meaning in art emphasizing the problem of interpretation. Models for criticism and contemporary debates about postmodern culture are examined. Topics include the relativity of interpretations, the role of styles and traditions, and the relationship of different artistic media to each other. Prerequisite: PHIL 283 or permission (Sufficient demand)
Course Attribute(s): CoB: Humanities

PHIL 388 - Topics in Metaphysics 2-4 hours. Metaphysical topics concern very basic questions about reality such as: How can things change and be the same? What constitutes personal identity? What is time? If the world is deterministic, can people be free? and, Does any kind of God exist? Prerequisite: completion of at least one philosophy course or permission of instructor. (Sufficient Demand)
Course Attribute(s): CoB: Humanities

PHIL 390 - Social and Political Philosophy Topics 2 or 4 hours. This course treats topics in social and political philosophy such as "Equality," "Freedom and Responsibility," "Freedom." Prerequisite: completion of at least one philosophy course or permission of instructor.
Course Attribute(s): CoB: Humanities

PHIL 400 - Topics in Philosophy 1-4 hours. Varying topics from year to year are selected from either the history of philosophy or contemporary philosophic problems. Prerequisites vary depending on the topic. (Sufficient demand)
Course Attribute(s): CoB: Humanities

PHIL 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

Physics
PHYS 111 - Introductory General Physics I 4 hours. A lecture and laboratory course which includes mechanics, wave motion and sound, fluids and heat. Calculus is not used but some knowledge of algebra and trigonometry is assumed.
Course Attribute(s): CLAS: (F-I) Scientific Inquiry, CLAS: (F1) Nat Sci w/Lab, CoB: Natural Science

PHYS 112 - Introductory General Physics II 4 hours. A lecture and laboratory course including electricity and magnetism, optics, and some modern physics. Calculus is not used but some knowledge of algebra and trigonometry is assumed. Prerequisite: PHYS 111 or PHYS 125.
Course Attribute(s): CLAS: (F-I) Scientific Inquiry, CLAS: (F1) Nat Sci w/Lab, CoB: Natural Science

PHYS 125 - Physics I 4 hours. A calculus-based lecture and laboratory course which includes one and two dimensional kinematics and dynamics, the work energy theorem, conservation of energy, the impulse momentum theorem, conservation of momentum, rotational and simple harmonic motion and gravitation. Prerequisite: MATH 151.
Course Attribute(s): CLAS: (F-I) Scientific Inquiry, CLAS: (F1) Nat Sci w/Lab, CoB: Natural Science

PHYS 126 - Physics II 4 hours. This calculus-based lecture and laboratory course includes electric field and potential, direct and alternating current circuits, magnetism and magnetic induction and an introduction to electromagnetic and other waves. Prerequisites: MATH 152 and PHYS 125.
Course Attribute(s): CLAS: (F-I) Scientific Inquiry, CLAS: (F1) Nat Sci w/Lab, CoB: Natural Science

PHYS 200 - Special Topics in Physics 1-4 hours. Topics vary from year to year and are designed especially for, but not limited to, non-science majors. Typical topics might be light and color, music and sound; or laboratory topics to include aspects of physics of interest to artists, musicians, photographers, environmentalists, etc. (Sufficient demand)

PHYS 201 - Computing in the Physical Sciences 3 hours. In this course students apply computer programming, logic, and/or modeling software to physical problems. Depending on the instructor or semester, various languages or modeling packages will be used. The emphasis is on the flow of logic and on how computers can be used to answer questions that cannot be answered in other ways. Prerequisites: PHYS 125/126.

PHYS 325 - Elementary Optics 3 hours. This course discusses geometrical and wave optics with special emphasis on optical instruments. Prerequisite: PHYS 126.
Course Attribute(s): CoB: Natural Science

PHYS 326 - Elementary Modern Physics 3 hours. This course includes basic relativity, quantum and waves aspects of radiation and particles, atomic structure, and an introduction to nuclear physics properties. Prerequisite: PHYS 126.
Course Attribute(s): CoB: Natural Science

PHYS 341 - Advanced Physics Laboratory 2 hours. A laboratory course involving experiments in mechanics, acoustics, heat, optics, electricity, and magnetism, electronics and atomic and nuclear physics. Prerequisite: PHYS 126.
Course Attribute(s): CoB: Natural Science

PHYS 400 - Special Topics 1-4 hours. Topics vary from year to year and are designed especially for, but not limited to, non-science majors. Typical topics might be light and color, music and sound; or laboratory topics to include aspects of physics of interest to artists, musicians, photographers, environmentalists, etc. (Sufficient demand)

PHYS 401 - Quantum Mechanics I 4 hours. This course presents Schrodinger's theory of quantum mechanics with applications to atomic systems. Includes origin of the quantum theory, wave-particle duality, approximation methods, and time-dependent problems. Prerequisite: PHYS 326. (Offered on demand)
Course Attribute(s): CoB: Natural Science

PHYS 405 - General Relativity 4 hours. We start with an extensive review of special relativity, followed by a detailed development of differential geometry which is the mathematics of the Einstein equations. The Einstein equations are then applied to such classic problems as the deflection of light by stars, the precession of the perihelion of mercury, the behavior of static and rotating black holes, and cosmology. Prerequisite: PHYS 326.
Course Attribute(s): CoB: Natural Science

PHYS 408 - Physics of Glass 4 hours. This class is a rigorous introduction to the physical principles and concepts behind glass. The role of the structure function and the pair distribution function in determining the structure of glass is examined. Viscoelastic theory and relaxation behavior are studied The thermodynamics of glass transition are examined using energy and enthalpy landscapes as well as temperature dependent constraint theory. Prerequisites: PHYS 125/126 and MATH 271. (Offered on demand)

PHYS 410 - Particle Physics 4 hours. Local gauge invariance is applied to the quantum theories of electrodynamics, strong, and weak V-A interactions. The Feynman rules and diagrams for these interactions are developed with a strong emphasis placed on the calculation of cross sections. The unification of electromagnetism and weak interactions into electroweak theory is developed and used to calculate cross sections. The important role that spontaneous symmetry breaking and the Higg's mechanism play in particle physics is developed in detail. Prerequisite: PHYS 401.
Course Attribute(s): CoB: Natural Science

PHYS 421 - Statistical Mechanics 4 hours. This course deals with the various aspects of macroscopic thermodynamics and describes these statistically in terms of the microstates of systems. Examples taken mainly from gaseous and solid systems. Prerequisite: PHYS 326 or permission of instructor. (Offered on demand)
Course Attribute(s): CoB: Natural Science

PHYS 423 - Classical Mechanics 4 hours. This course makes more sophisticated use of the basic laws of mechanics and includes sections on rotating coordinate systems, orbits in inverse square law fields, the analysis of vibrating systems and waves, Lagrange's and Hamilton's equations, and an introduction to the topic of chaos. Prerequisite: PHYS 326 or permission of instructor. (Offered on demand)
Course Attribute(s): CoB: Natural Science

PHYS 424 - Electricity and Magnetism I 4 hours. A study of electric and magnetic fields and their origins in free space as well as in materials. Includes an introduction to vector calculus, solutions to Laplace's equation, multipole expansions, and Maxwell's equations in differential and integral form. Prerequisite: PHYS 326 or permission of instructor. (Offered on demand)
Course Attribute(s): CoB: Natural Science

PHYS 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

PHYS 454 - Advanced Electricity and Magnetism II 4 hours. The electromagnetic Lagrangian, as well as the Lagrangian density, is developed. The relativistic transformation equations for the electromagnetic fields are derived and applied. Electromagnetic radiation is examined as are wave guides. Prerequisite: PHYS 424. (Offered on demand)

Political Science

POLS 110 - American Politics 4 hours. An introductory survey of the American political system. Emphasis on the structures and processes of the political system with additional study of some of the problems faced by the system.
Course Attribute(s): CLAS: (E2) Soc Sci-Pols/Econ, CoB: Social Science, SoAD: Humanities-'Other'

POLS 200 - Special Topics 1-4 hours. Examines topics of special interest not normally covered in other political science courses. Examples are Biopolitics, Political Socialization. (Sufficient demand)

POLS 214 - Environment, Politics and Society 4 hours. This course examines multiple trajectories of environmental change in the United States since the dawn of the industrial age,

explores the basic societal forces that drive processes of environmental decay today, and explores major environmental issues/controversies at the center of contemporary debate. (Cross-listed as ENVS 214, SOCI 214)
Course Attribute(s): CoB: Social Science

POLS 220 - Perspectives on Political Science 2 hours. Intended as a foundation course for further work in political science. Students examine frequently used approaches to the study of politics, consider the question of personal values in political science, and investigate attempts to study politics in a scientific way.

POLS 230 - Introduction to Data Analysis and Statistics 4 hours. This course is an introduction to statistics and data analysis for students in the social sciences, covering the nature of variables, descriptive statistics, probability, and inferential statistics. Students learn to use a statistical software program to analyze large data sets to further their understanding of the importance of data analytics to an examination of social and political life. (Cross-listed as SOCI 230)
Course Attribute(s): CLAS: (03) Quant Reasoning, CoB: Quant Reasoning

POLS 232 - Judicial Processes 4 hours. The theory and practice of judicatory systems with primary emphasis on Anglo-American judicial processes and problems.
Course Attribute(s): CoB: Social Science

POLS 237 - Media and Politics 4 hours. This course examines the relationship between mass media and politics. We will explore the ways in which mass communications media shape the politics of elections, daily governance, U.S. foreign policy, interest groups, social movements, and identity. (Cross-listed as COMM 237, SOCI 237)
Course Attribute(s): CoB: Social Science

POLS 242 - Approaches to Law 4 hours. What is the law and why do we obey it? What authority stands behind law? How do our answers influence the way we make and interpret law? We examine how others have approached these kinds of questions with an eye toward better understanding our own legal system.
Course Attribute(s): CoB: Social Science

POLS 253 - Dictatorship and Democracy 4 hours. This course comparatively examines four political movements (Liberalism, Communism, Fascism, and Islamic Fundamentalism) that have shaped the evolution of modern politics around the world, from authoritarian rule to representative democracy.
Course Attribute(s): AU: Global Perspective, CoB: Social Science

POLS 271 - World Politics 4 hours. This course examines the changing nature of world politics, exploring broad themes such as the evolution of warfare, the role of leading powers, the rise of international organizations, and global political economy. Specific transnational challenges addressed include terrorism, human rights, nuclear proliferation, clashing collective identities and environmental degradation.
Course Attribute(s): AU: Global Perspective, CLAS: (E2) Soc Sci-Pols/Econ, CoB: Social Science, SoAD: Humanities-'Other'

POLS 300 - Special Topics 1-4 hours. Examines topics of special interest not normally covered in other political science courses. Examples are Biopolitics, Political Socialization. (Sufficient demand)
Course Attribute(s): CoB: Social Science

POLS 304 - Equality 2 hours. Equality is a core concept in contemporary philosophy and in discussions of social justice generally. In this course we discuss different kinds of equality: equality of opportunity, racial equality, sexual equality and political equality. Previous coursework in political science or philosophy is desirable but not required. (Cross-listed as PHIL 304, SJST 304)
Course Attribute(s): CoB: Humanities

POLS 311 - Greek Philosophy 4 hours. This course covers the history of Greek philosophy from the Presocratic through the Hellenistic period. Special emphasis is given to Plato and to Aristotle. (Cross-listed as PHIL 311)
Course Attribute(s): CoB: Humanities

POLS 313 - State and Local Politics 4 hours. In the American governmental system, the intertwined destinies of states and their local governments are critical. This course studies the structure of decision-making at the state and local level, forces affecting decision, outcomes of decision, and the challenges governments face. (Alternate years)
Course Attribute(s): CoB: Social Science

POLS 316 - American Constitutional Law and Politics 4 hours. In this course we examine the development of the Supreme Court as a major political institution concentrating primarily on the Court's decisions and its internal politics. Prerequisite: POLS 110; junior or senior standing recommended. (Cross-listed as SJST 316)
Course Attribute(s): CoB: Social Science

POLS 318 - The Presidency 4 hours. After studying the evolution of presidential power, this course will examine the relationship of the presidency to other branches of government. Students will also learn how presidents work within and against political constraints in order to get policies enacted. Prerequisite: POLS 110.
Course Attribute(s): CoB: Social Science

POLS 321 - The History of Fascism 4 hours. This course is a study of the history of fascism. We examine the origins of fascist ideas and organizations; the varieties of fascist organizations and beliefs in Europe and European colonies; and the impact of fascism on politics and society before, during and after the Second World War. (Cross-listed as HIST 321)
Course Attribute(s): AU: Global Perspective, CoB: Humanities

POLS 329 - Revolution and Culture: Hegel, Marx, Nietzsche 4 hours. An in-depth study of major texts by Hegel, Marx, and Nietzsche, with a thematic focus on the nature of historical change, the interpretation of history, and the relationship between material life and culture, including religion, philosophy, politics, and morality. (Cross-listed as HIST 329, PHIL 329)
Course Attribute(s): CoB: Humanities

POLS 331 - Parties and Elections 4 hours. With emphasis on the American system, we analyze theories of parties, party organization, party conduct of campaigns and elections, voting behavior, and party roles in government.
Course Attribute(s): CoB: Social Science

POLS 341 - Modern Political Theory 4 hours. This course is a survey of the major political theorists from the Renaissance through the twentieth century, with primary emphasis on western thinkers. Particular attention is given to theory as an historical and cultural phenomenon. (Cross-listed as PHIL 341, SJST 341)
Course Attribute(s): CoB: Social Science

POLS 346 - American Political Thought 4 hours. This course introduces students to political thought in the United States. It explores "liberal" ideals such as individualism, freedom, equality, citizenship, and democracy, as well as important alternatives to those ideas. It will also examine the ways in which race, ethnicity, and gender have shaped American political thought. Prerequisite: POLS 110. (Cross-listed as SJST 336)
Course Attribute(s): CoB: Social Science

POLS 351 - European Politics 4 hours. From post-WWII attempts to prevent future conflicts has grown a unique political structure called the European Union. This course analyzes the political institutions and political culture of both the European Union and some important countries making up the EU. (Cross-listed as GLBS 351)
Course Attribute(s): AU: Global Perspective, CoB: Social Science

POLS 355 - Public Policy 4 hours. The policy process is the heart of politics: "Who gets What, When, How?" This course emphasizes the stages of the process and the types of policies that government considers. A case study of some policy area (elderly) is provided.
Course Attribute(s): CoB: Social Science

POLS 356 - Social Movements 4 hours. This course explores the experiences of social movements that struggle for justice and societal transformation along lines of class, race, ethnicity, gender, sexuality, religion, and more. Why do they emerge? How do they organize and operate? Why do they succeed or fail? (Cross-listed as SJST 356, SOCI 356)
Course Attribute(s): CoB: Social Science

POLS 373 - Terrorism and International Security 4 hours. This course will deepen students' understandings of 1) what terrorism is, 2) how terrorism has evolved over time, 3) the key factors generating contemporary terrorism, 4) how terrorism is inspired, financed and organized, and 5) counterterrorist strategies.
Course Attribute(s): AU: Global Perspective, CoB: Social Science

POLS 382 - Latin American Politics 4 hours. After a brief review of the region's colonial and 19th-century political histories, this course focuses on the changing patterns of modern politics in leading Latin American countries, from "oligarchical" plutocracy to mass-based populism and socialist revolution, from repressive military authoritarianism to more recently established models of representative and participatory democracy. (Cross-listed as HIST 382)
Course Attribute(s): AU: Global Perspective, CoB: Social Science

POLS 400 - Special Topics 1-4 hours.

POLS 411 - Bureaucracy 4 hours. Analysis of the administrative policy processes at the national level. Internal interaction and budgetary processes as well as interchange with external governmental and political institutions. Prerequisite: POLS 110. (Alternate years)
Course Attribute(s): CoB: Social Science

POLS 417 - American Civil Liberties 2 hours. Analysis of such current legal and political issues as free speech, religion, poverty, privacy, obscenity, and racial and sexual discrimination with attention to both established and latent areas of concern. Focuses on Supreme Court activity. Other governmental action considered, along with the theoretical and social contexts of the problems examined. Prerequisite: junior or senior standing.
Course Attribute(s): CoB: Social Science

POLS 420 - Social Theory: A Survey 4 hours. An examination of contemporary theoretical schools, e.g. symbolic interactionism, structural functionalism, exchange and conflict, and ethnomethodology. Special attention devoted to the precursors and contemporary representatives of the respective schools. Prerequisite: SOCI 110 or ANTH 110 or permission of instructor. (Cross-listed as SOCI 420) (Offered Fall, odd years)
Course Attribute(s): CoB: Social Science

POLS 431 - Research Design and Strategies 4 hours. This course examines the methods by which social science researchers generate new knowledge and covers major data collection designs, sampling techniques, and measurement strategies. Students spend the semester developing their research skills and designing their own research proposals. Prerequisite: SOCI/POLS 230. (Cross-listed as SOCI 431)
Course Attribute(s): CoB: Social Science

POLS 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Open to Political Science majors at the permission of instructor. Approved Plan of Study required.

POLS 470 - Field Work 2-4 hours. Supervised on-site field work on an approved topic. Prerequisites: Junior/senior standing; minimum 2.5 overall GPA and permission of instructor.

Psychology
PSYC 101 - Introduction to Psychology 4 hours. An introduction to the scientific study of behavior and mental processes. Topics typically include sensation and perception, learning and memory, consciousness, cognition and mental abilities, motivation and emotion, human development, personality, gender and sexuality, psychological disorders and therapies, and social influences on behavior.
Course Attribute(s): CLAS: (E1) Social Sci-Psyc, CoB: Social Science

PSYC 118 - Introduction to Adult Development and Aging 4 hours. This course examines adulthood and aging from a biopsychosocial perspective. Topics include research methodology in adulthood; theories of normal aging, physical and environmental influences on adult development; diseases and disorders associated with aging; changes in cognition; intelligence and wisdom; gender and minority issues in aging; issues regarding death and dying. It also challenges popular misconceptions about aging. (Cross-listed as GERO 118, SJST 118)
Course Attribute(s): CLAS: (E1) Social Sci-Psyc, CoB: Social Science

PSYC 200 - Special Topics 1-4 hours.

PSYC 210 - Communication and Counseling Skills 2 hours. Focused on working with adults, this course teaches interpersonal communication and counseling skills and theory to students preparing for careers in the helping professions. The course promotes self-understanding through experiential learning and role playing. Videotaping and microlabs may be employed. Prerequisite: PSYC 101 or GERO 118.
Course Attribute(s): CoB: Social Science

PSYC 220 - Psychological Methods and Statistics 4 hours. An introduction to the use of data and theory in psychology. Topics include: philosophy of the scientific method, experiments and other research strategies, descriptive and inferential statistics and hypothesis testing. The course emphasizes statistical reasoning and its relationship to the scientific method. Required for majors and minors. Prerequisite: PSYC 101.
Course Attribute(s): CLAS: (03) Quant Reasoning, CoB: Quant Reasoning

PSYC 230 - Psychological Research and Design I 2 hours. Students learn how to apply the scientific method to study human behavior. The steps from reviewing the literature and generating a hypothesis to developing measurement procedures will be practiced. The final project will be an APA-style research proposal. Prerequisite: PSYC 220.
Course Attribute(s): CoB: Social Science

PSYC 251 - Principles of Learning and Behavior Modification 4 hours. The principles and techniques of behavioral assessment and management are examined, including how to strengthen adaptive behavior through shaping, reinforcement schedules, and relapse prevention and how to minimize or eliminate maladaptive behavior through behavior modification methods such as stimulus control and extinction procedures. Prerequisite: PSYC 101.
Course Attribute(s): AU: Wellness (Fall '19), CoB: Social Science

PSYC 261 - Cognitive Development 4 hours. The course examines the theories and research in cognitive development from infancy through adolescence. Piagetian, Vygotskian, and Information-Processing Approaches are explored while examining the development of processes including attention, perception, memory, language, and reasoning. Prerequisite: PSYC 101.
Course Attribute(s): CoB: Social Science

PSYC 262 - Social Development 4 hours. This course examines theories and research in child and adolescent social development. Relations with parents and peers, prosocial behavior, aggression, sex-role development, and social-cognitive development are studied. Prerequisite: PSYC 101.
Course Attribute(s): CoB: Social Science

PSYC 282 - Social Psychology 4 hours. In this course we study the influence people have on each other's behavior, perception, motivation, feelings and cognition. Topics include the self and identity, social perception and cognition, attribution, race and gender, prejudice and discrimination, conformity and obedience, groups and leadership, attitudes and persuasion, aggression and violence, helping and altruism, attraction and love, conflict and peacemaking. Prerequisite: PSYC 101. (Cross-listed as SJST 282)
Course Attribute(s): CoB: Social Science

PSYC 300 - Special Topics 1-4 hours. A series of directed readings, changing from semester to semester, which affords the student an opportunity to pursue topics of special interest in greater depth by intensive reading, discussion and seminar feedback.
Course Attribute(s): CoB: Social Science

PSYC 302 - Psychological Measurement 2 or 4 hours. An introduction to psychological assessment through a survey of the principles of test design, scoring, and interpretation for tests of achievement, intelligence, personality, career interests, and attitudes. Specific concepts include: item analysis and norms, reliability and validity, ethical and legal standards. Prerequisite: PSYC 101 and PSYC 220.
Course Attribute(s): CoB: Social Science

PSYC 306 - Personal Identity and the Self 2 hours. What constitutes a person's identity and what is the self? Does being the same person over time mean having the same body or is psychological continuity required? If it is psychological, then is it acquired and can it be lost? Finally, is there a self? What we learn from medical science, psychology and philosophy are brought together in this discussion. Prerequisite: previous course work in philosophy, psychology or permission of the instructor. (Cross-listed as PHIL 306)
Course Attribute(s): CoB: Humanities

PSYC 309 - Philosophical Psychology 4 hours. Discussion of the nature of consciousness, self-consciousness, and intentionality. Topics include: mind and language, the architecture of the human mind, varieties of psychological explanation, recent mind/body debates, the reality of selves, and animal consciousness and its evolutionary value. Prerequisite: previous coursework in psychology, philosophy or permission of instructor. (Cross-listed as PHIL 309)
Course Attribute(s): CoB: Humanities

PSYC 310 - Professional Preparation in Psychology 2 hours. In this course we summarize psychology fields and discuss how to pursue graduate study and/or careers. Students write/critique cover letters, resumes, and essays. They take a GRE preparation test, participate in mock interviews, and interview a professional in a psychology field. Prerequisite: PSYC 101.
Course Attribute(s): CoB: Social Science

PSYC 311 - Sensation and Perception 4 hours. A study of the physiological and psychological processes involved in the immediate experience of sensory stimulation. Topics include sensory systems and coding mechanisms, psychophysical methods, signal detection, illusions, and complex perceptual processes. Prerequisite: PSYC 101.
Course Attribute(s): CoB: Social Science

PSYC 320 - Parenting Seminar 2-3 hours. This course provides students with an opportunity to learn about effective parenting through reading of literature and group discussion. The course explores a wide variety of issues, concerns, and problems that parents often face as well as the joy and gratification that effective parenting brings. Prerequisite: PSYC 101. (Cross-listed as WGST 320)
Course Attribute(s): CoB: Social Science

PSYC 322 - Health Psychology 2-4 hours. The critical link between health and behavior is the focus of this course. Students discuss and explore, in seminar format, health-related topics such as nutrition, addiction, exercise, life stress, health care delivery systems, alternative medicine, AIDS, health promotion behavior and personality and proneness to disease. Prerequisite: PSYC 101.
Course Attribute(s): AU: Wellness (Fall '19), CoB: Social Science

PSYC 330 - Neuropsychology 4 hours. A non-laboratory course dealing with the neurological correlates and determinants of behavior. Emphasis on basic neuroanatomy and neurophysiology underlying human behavior, i.e., the physical basis of movement sensation, perception, emotion, motivation, learning, memory and language.
Course Attribute(s): CoB: Social Science

PSYC 332 - Cognitive Processes 4 hours. An exploration of the psychological organization and functions of the mind. The point of view of people as active processors of information is adopted. Topics include attention, recognition, varieties of memory, psycholinguistics and consciousness. Emphasis is placed on the experimental method and its application to the study of cognitive experiences and activities. Prerequisite: PSYC 101 or permission.
Course Attribute(s): CoB: Social Science

PSYC 341 - Theories of Personality 4 hours. This course examines the philosophic, scientific, and applied aspects of personality theory and research. The major orientations toward investigating personality will be explored, e.g., psychodynamic, depth-psychological, trait-factor, humanistic, and cognitive-personality models. Emphasis is placed on developing a working knowledge of each theory and methods of conducting personality research. Prerequisite: PSYC 101.
Course Attribute(s): CoB: Social Science

PSYC 342 - Psychopathology 4 hours. Examines the biological, psychological and societal perspectives on the taxonomy, etiology, and treatment of clinically significant psychopathology. Provides a basis for understanding the personal and social problems of such individuals. Prerequisite: PSYC 101. Recommended: PSYC 261, 262, 282 or 341.
Course Attribute(s): CoB: Social Science

PSYC 351 - Human Sexuality 4 hours. In this course we discuss sexual attitudes and behavior, gender roles, love and intimacy, contraception and abortion, pregnancy and childbirth, marriage and family life, variations in sexualities, STDs, and the many psychological and cultural factors that affect human sexual behavior. (Cross-listed as WGST 351)
Course Attribute(s): CoB: Social Science

PSYC 362 - Industrial/Organizational Psychology 4 hours. This course is designed to acquaint students with work psychologists perform in organizational settings. Topics may include methodology of industrial/organizational psychology, personnel selection, training and development, job satisfaction, leadership, work motivation, human performance and human engineering, performance appraisals, job stress and consumer behavior. Prerequisite: PSYC 101.
Course Attribute(s): CoB: Social Science

PSYC 371 - The Psychology of Death and Dying 4 hours. The study of death addresses questions rooted at the center of human experience. Included are historical and modern concepts, attitudes and practices toward the dying and the bereaved; psychological stages and experiences through which the dying may pass; an investigation of suicide including prevention, intervention and postvention; the concept of death in health care, medical ethics and law. Prerequisite: PSYC 101.
Course Attribute(s): CoB: Social Science

PSYC 372 - Psychology of Gender 4 hours. This course examines the psychological, biological, social, and life-span development differences and similarities of the genders. Topics include cognitive abilities and achievement, personality characteristics, work issues, violence prevention, love relationships and sexualities, reproductive concerns, and physical and mental health issues. Prerequisite: PSYC 101. (Cross-listed as WGST 372)
Course Attribute(s): CoB: Social Science

PSYC 389 - Introduction to Art Therapy 3 hours. An introduction to art as a psychotherapeutic modality. Topics include art as a diagnostic tool, art as a means for emotional expression, theoretical backgrounds, and developmental stages of art. This course promotes experiential learning through participation in art therapy exercises. Prerequisite: PSYC 101; PSYC 342 and either PSYC 261 or 262 recommended.
Course Attribute(s): CoB: Social Science

PSYC 411 - Psychological Research and Design II 4 hours. An advanced course in psychological research methods. Includes the logic of various research designs (variables, confounds) and their statistical analysis. The class designs and conducts several studies, gathering and interpreting data. Involves APA style report writing and the use of computers in research. Prerequisites: PSYC 220 and PSYC 230.
Course Attribute(s): CoB: Social Science

PSYC 412 - Research Practicum 4 hours. Students in this research practicum apply the scientific method to study human behavior. Students will be certified and approved to ethically conduct research on human subjects, independently design and conduct an original empirical study, gather and interpret their own data, and write a research report using APA style. Students disseminate their research findings in a professional-style presentation. Prerequisite: PSYC 411.
Course Attribute(s): CoB: Social Science

PSYC 429 - Cognition and Aging 2 hours. A lecture and discussion course covering current research and theories of cognitive processes in the older adult. Basic topics include age differences in memory, verbal processes, motor performance, perception, problem solving, and intelligence. Prerequisite: PSYC 101. Recommended: PSYC 332 or GERO 272 or permission of instructor. (Cross-listed as GERO 429) (Alternate years)
Course Attribute(s): CoB: Social Science

PSYC 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.
PSYC 471 - Child Psychopathology 3 hours. Through readings, presentations, and discussions, this course seeks to illuminate variation in child/adolescent behavior, emotion, and personality. Course material will consist of theory, research, and practice regarding "disturbed" and "disturbing" children and

adolescents. Prerequisite: PSYC 261, 262 or 342; or permission of the instructor. Not open to students who have taken PSYC 477.
Course Attribute(s): CoB: Social Science

PSYC 472 - Child Interventions 3 hours. This seminar introduces students to interventions for children and adolescents with disabilities and mental health disorders. Treatment strategies will be explored (such as behavior modification, play therapy, family therapy) along with treatment settings in which such therapies are delivered (schools, community mental health centers, institutions). Prerequisite: PSYC 261, 262, or 342.
Course Attribute(s): CoB: Social Science

PSYC 477 - Child and Adolescent Psychopathology 4 hours. This course explores the field of child and adolescent psychopathology, including the theories and research that serve as the foundation of assessment, diagnosis and treatment of psychological disorders. Prerequisite: PSYC 261, 262 or 342; or permission of the instructor. Not open to students who have taken PSYC 471.
Course Attribute(s): CoB: Social Science

PSYC 485 - Practicum 2-4 hours. A supervised field experience planned to develop skills in designing interventions within educational, vocational, social services or mental health settings. In addition to field placements, students may meet in weekly seminars to discuss current literature. Prerequisites: PSYC 101 and permission of instructor.
Course Attribute(s): CoB: Social Science

PSYC 491 - Clinical Procedures 4 hours. Focuses on the development and application of general clinical skills. Each student has the opportunity to demonstrate these skills through supervised interactions with a volunteer counselee. Prerequisites: PSYC 210, 341 or 342; and permission of Division Selection Committee.
Course Attribute(s): CoB: Social Science

PSYC 492 - Clinical Practicum 4 hours. This course provides advanced clinical/counseling-track psychology students with practical experience in a human service setting. Since each practicum site offers a somewhat different experience, attempts are made to place students in a setting that matches their interests. Supervision is provided for both on-site and in-class work. Prerequisites: PSYC 491 and permission of Division Selection Committee.
Course Attribute(s): CoB: Social Science

PSYC 497 - Senior Seminar 2 hours. This course provides students with an opportunity to explore contributions of important research and theorists through reading of literature, group discussions, and paper presentations. It will also focus on a variety of contemporary topics and issues. Required for majors. Prerequisite: Completion of 20 hours of psychology coursework.

Religious Studies
RLGS 105 - Introduction to Religions of the World 4 hours. An introduction to the study of religion through an examination of selected religious traditions (e.g., Christian, Jewish, Islamic, Hindu, Buddhist, Daoist, Yoruba). Attention is given to the experience, expression, and practice of religion in different historical and cultural contexts as well as to different theoretical approaches to the study of religion.
Course Attribute(s): AU: Global Perspective, CLAS: (B) Philos/Relig Studies, CoB: Humanities, SoAD: Humanities-Area B or D

RLGS 165 - Asian Religions 4 hours. An introduction to selected Asian religious traditions (e.g., Hindu, Buddhist, Sikh, Shinto, Confucian, Daoist), with attention to their historical and contemporary contexts.
Course Attribute(s): AU: Global Perspective, CLAS: (B) Philos/Relig Studies, CoB: Humanities, SoAD: Humanities-Area B or D

RLGS 200 - Topics in Religious Studies 1-4 hours. An examination of issues in religious studies. Topics vary each time the course is offered. (Sufficient demand)

RLGS 240 - Religion in America 4 hours. An examination of the impact of religion in shaping American culture. Major thinkers such as Edwards, James, Emerson and Niebuhr, historical movements such as revivalism and social gospel, and distinctive themes such as religious pluralism, civil religion and ethnic awareness. (Sufficient demand)
Course Attribute(s): CLAS: (B) Philos/Relig Studies, SoAD: Humanities-Area B or D

RLGS 254 - Birth of the Christian Tradition 4 hours. An exploration of the early Christians' religious experience both by studying their writings (e.g., letters, gospels, apocalyptic discourses, theological treatises, liturgical manuals - some in the New Testament) and by examining the Jewish, Greek and Roman cultures from which Christianity emerged. (Offered: on demand)
Course Attribute(s): CLAS: (B) Philos/Relig Studies, SoAD: Humanities-Area B or D

RLGS 274 - Hindu Religious Traditions 4 hours. The third largest religion in the world, Hinduism includes a diversity of religious practices, communities, traditions, and beliefs. This course examines aspects of Hinduism from the Vedic period to the present day while introducing different approaches to the academic study of religion.
Course Attribute(s): AU: Global Perspective, CLAS: (B) Philos/Relig Studies, CoB: Humanities

RLGS 300 - Topics in Religious Studies 1-4 hours. An examination of issues in religious studies. Topics vary each time the course is offered. (Sufficient demand)

RLGS 307 - Myth, Ritual, and the Creative Process 4 hours. A cross-cultural explanation of how people establish their world views by narrating stories and by acting out their deepest aspirations and beliefs. Special attention to how and why symbolic frameworks are transmuted from certain forms to others through creative imagination. Prerequisite: One course in Religious Studies or Philosophy, or permission of instructor. (Alternate years)

RLGS 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

Science
SCIE 110 - Weather Elements 2 hours. Analyzes the fundamental physical processes of the atmosphere and their

relationships to the daily weather pattern and weather forecasting in the United States. May be taken for science credit. (Sufficient demand)
Course Attribute(s): CLAS: (F-III) Science/Society, CLAS: (F2) Nat Sci-no Lab, CoB: Natural Science

SCIE 111 - Science in Science Fiction 2 or 4 hours. Science fiction is intimately connected with science. In the sub-genre of hard science fiction, the story is founded on sound scientific or technological extrapolations and explores how individuals and society react to the changes. This course will look at the science used in a variety of short stories, novels and films. Topics can include planetary science, genetic engineering, artificial intelligence, celestial mechanics, black holes, chemistry, physics, and ecology.
Course Attribute(s): CLAS: (F-III) Science/Society, CLAS: (F2) Nat Sci-no Lab, CoB: Natural Science

SCIE 115 - Life in the Universe 4 hours. In this course, we take a look at the past and future of astrobiology. Issues covered include how we discovered our physical place in the universe, the origins of life and intelligent life, the physical and chemical conditions need for life as we know it, and where we can find those conditions in the solar system and beyond.
Course Attribute(s): CLAS: (F-III) Science/Society, CLAS: (F2) Nat Sci-no Lab, CoB: Natural Science

SCIE 117 - Integrated Science 4 hours. Content-based survey of the Physical Setting Core Curriculum for Elementary (K-4) and Intermediate (5-8) Level Science, emphasizing the chemical and physical laws that describe our surroundings and the interactions of inanimate environmental components. Illustrates chemistry and physics concepts with real-world examples and links them with earth science, numeracy, and art as reinforced by the associated inquiry-based laboratory addressing the complementary Process Skills. Includes modern methods of acquiring, analyzing, modeling/interpreting, and communicating data from the physical sciences. Manipulatives, models, and experiments for understanding physical properties and chemical structure are featured in the hands-on laboratory. Prerequisite: Major or minor in education; others by permission of instructor.
Course Attribute(s): CLAS: (F1) Nat Sci w/Lab, CoB: Natural Science

SCIE 127 - Doing Science 4 hours. In this course, students learn science by doing science, planning and executing their own experiments devised to answer questions they have about a central theme. This course is taught by faculty from different scientific or mathematics backgrounds who guide students in their investigations. Content will cover a broad range of scientific disciplines, emphasizing earth, environmental and life sciences. Fulfills the CLAS Quantitative Reasoning basic competency and counts as a "Scientific Inquiry" course in general education.
Course Attribute(s): CLAS: (03) Quant Reasoning, CLAS: (F-I) Scientific Inquiry, CLAS: (F1) Nat Sci w/Lab, CoB: Natural Science

SCIE 200 - Special Topics in Science 1-4 hours. Topics vary from year to year.

SCIE 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

Social Justice Studies
SJST 100 - Special Topics in Social Justice Studies 1-4 hours. In this course topics in Social Justice Studies are explored. Topics vary from term to term.

SJST 101 - Introduction to Social Justice Studies 4 hours. In Social Justice Studies, we analyze power, privilege, and oppression: Do individuals from all identity groups enjoy equitable access to economic, political, and cultural power, and have the opportunity to participate fully in shaping their society? Just what is an identity group, and how do such groups form? Where do prejudice and discrimination come from, and what strategies have been used to effect social change? What conceptions of justice inform the way we think about the distribution of social resources? Guided by an interdisciplinary team of instructors, students address these questions through reading, writing, and hands-on learning. (This is the core course for the minor in Social Justice Studies.)
Course Attribute(s): CoB: Social Science

SJST 110 - Introduction to Sociology 4 hours. This is the foundation course in sociology, covering the basic concepts needed for a sociological understanding of society. These include culture, socialization, deviance, social stratification, race and ethnicity, gender, sexuality, families, social movements, and social change. The course is designed primarily for first year students. (Cross-listed as SOCI 110)
Course Attribute(s): CLAS: (E3) Soc Sci-Soc/Anth, CoB: Social Science, SoAD: Humanities-'Other'

SJST 115 - Concepts of Service Learning 2 hours. This course explores service learning as a way of accomplishing and demonstrating civic engagement through weekly class discussions, reflective writing, and weekly service hours in the local community. Each student selects a service project to satisfy the main requirement of at least 4 hours of service work per week. Service projects vary from term to term. (Cross-listed as UNIV 115)
Course Attribute(s): AU: Service Learning Courses, CoB: Social Science

SJST 118 - Introduction to Adult Development and Aging 4 hours. This course examines adulthood and aging from a biopsychosocial perspective. Topics include research methodology in adulthood; theories of normal aging, physical and environmental influences on adult development; diseases and disorders associated with aging; changes in cognition; intelligence and wisdom; gender and minority issues in aging; issues regarding death and dying. It also challenges popular misconceptions about aging. (Cross-listed as GERO 118, PSYC 118)

Course Attribute(s): CLAS: (E1) Social Sci-Psyc, CoB: Social Science

SJST 200 - Special Topics in SJST 1-4 hours. In this course topics in Social Justice Studies are explored. Topics vary from term to term.

SJST 201 - Women and Gender in Society 4 hours. This interdisciplinary course is the foundation of Women's and Gender Studies. It examines the relationships of women and gender worldwide to institutions and developments in the social, cultural, political, and economic spheres. Topics may include: the origins and development of modern feminism; gender and sexuality; progress and challenges for women and girls

worldwide; reproductive justice and healthcare; women and work; sexual harassment and sexual assault; masculinities; gender in popular culture and the arts; the intersections of gender, class, race, and age; women and religion; women and leadership; and women and athletics. (Cross-listed as WGST 101)
Course Attribute(s): CoB: Social Science, SoAD: Humanities-'Other'

SJST 213 - Speaking the Unspeakable: Argentina's Literature of Dictatorship 4 hours. This course introduces literary representations of state violence and resistance during the Argentine military dictatorship of the 1970s and 1980s. We engage in close readings of a variety of literary genres, including novels, short stories, autobiography, and testimonial literature. We combine literary readings with study of historical and theoretical texts in order to deepen our understanding of state terrorism, resistance, trauma, memory, and justice. The course is conducted in English, including the readings and films. (Cross-listed as GLBS 213, SPAN 213)
Course Attribute(s): AU: Global Perspective, CLAS: (A) Literature, CoB: Social Science

SJST 217 - Exiled from Justice: Equatorial Guinean Writers in Africa and Spain 4 hours. Students explore Equatorial Guinea's literature in the context of its colonial relationship to Spain and its postcolonial position in Africa. Students study the history of Equatorial Guinea, located on the central west African coast, as well as the impact of its wealth of petroleum on development since independence from Spain in 1968.The writers and artists of Equatorial Guinea, residing either in Africa, Spain, or Latin America, create and challenge the definitions of Guineidad as they advocate for justice and a return to a homeland whether literal or metaphorical. Spanish majors/minors will complete some readings in Spanish and complete written work in Spanish. Class is conducted in English. Readings are all available in English. (Cross-listed as SPAN 217)
Course Attribute(s): AU: Global Perspective, CLAS: (A) Literature, CoB: Humanities

SJST 222 - The Harlem Renaissance 4 hours. In this course students explore the literature and music of African-Americans produced in and around Harlem in New York City in the 1920s to the 1940s. Central to such exploration will be the contemporary cultural and political issues that faced the Afro-American artist. (Cross-listed as ENGL 222)
Course Attribute(s): CLAS: (A) Literature

SJST 226 - The Holocaust and Literature 4 hours. In this course students examine the Nazi destruction of the European Jews through diaries, survivors' memoirs, novels, poetry and drama. Additionally, representations of the Holocaust in art, recorded testimony, public memorials, film and music are explored. (Cross-listed as ENGL 226)
Course Attribute(s): AU: Global Perspective, CLAS: (A) Literature, CoB: Humanities

SJST 254 - Women Writers 2 or 4 hours. A course that examines issues of language, gender, and culture portrayed through the lens of the woman writer. Texts may include novels, stories, autobiographies, essays, letters, and poetry. (Cross-listed as ENGL 254, WGST 254)
Course Attribute(s): CLAS: (A) Literature, SoAD: Humanities-'Other'

SJST 256 - Multicultural American Lit 4 hours. This course explores the rich diversity of American literature, raising questions like What does it mean to be or become American? What is gained, what is lost, what can be protected or preserved? What is the meaning of the past, of roots, of traditions? Students examine how this body of literature reimagines the dominant American culture and reflect on their own multicultural competence. (Cross-listed as ENGL 256, WGST 256)
Course Attribute(s): CLAS: (A) Literature, CoB: Humanities, SoAD: Humanities-'Other'

SJST 282 - Social Psychology 4 hours. In this course we study the influence people have on each other's behavior, perception, motivation, feelings and cognition. Topics include the self and identity, social perception and cognition, attribution, race and gender, prejudice and discrimination, conformity and obedience, groups and leadership, attitudes and persuasion, aggression and violence, helping and altruism, attraction and love, conflict and peacemaking. Prerequisite: PSYC 101. (Cross-listed as PSYC 282)
Course Attribute(s): CoB: Social Science

SJST 294 - Art Force 5: Social Justice Research, Design, Outreach 2 hours. This course will research and design community-based art, with each semester focusing on a different historical theme. Past themes have included suffragist movement, the Harlem Hellfighters, Harlem Renaissance. Students research assigned individuals and design one community outreach project to serve an identified community. (Offered Fall, Spring) (Cross-listed as ART 294)

SJST 300 - Special Topics in Social Justice Studies 1-4 hours. In this course topics in Social Justice Studies are explored. Topics vary from term to term.

SJST 304 - Equality 2 hours. Equality is a core concept in contemporary philosophy and in discussions of social justice generally. In this course we discuss different kinds of equality: equality of opportunity, racial equality, sexual equality and political equality. Previous coursework in political science or philosophy is desirable but not required. (Cross-listed as PHIL 304, POLS 304)
Course Attribute(s): CoB: Humanities

SJST 307 - Post-World War II America 4 hours. This course is a historical survey of domestic events since World War II with particular attention to the fate of the New Deal, McCarthyism, the Kennedy legacy, the impact of Vietnam, and the civil rights and women's movements. (Cross-listed as HIST 307)

SJST 316 - American Constitutional Law and Politics 4 hours. In this course we examine the development of the Supreme Court as a major political institution concentrating primarily on the Court's decisions and its internal politics. Prerequisite: POLS 110; junior or senior standing recommended. (Cross-listed as POLS 316)
Course Attribute(s): CoB: Social Science

SJST 336 - American Political Thought 4 hours. This course introduces students to political thought in the United States. It explores "liberal" ideals such as individualism, freedom, equality, citizenship, and democracy, as well as important alternatives to those ideas. It will also examine the ways in

which race, ethnicity, and gender have shaped American political thought. Prerequisite: POLS 110. (Cross-listed as POLS 346)
Course Attribute(s): CoB: Social Science

SJST 340 - Concepts of Penology 4 hours. A survey of correctional concepts and philosophy with emphasis on the correctional institution as a community and the sociology of confinement. Additional focus on penal reform, correctional administration and innovation. Prerequisites: SOCI 110 and SOCI 245. (Cross-listed as CRIM 340)
Course Attribute(s): CoB: Social Science

SJST 341 - Modern Political Theory 4 hours. This course is a survey of the major political theorists from the Renaissance through the twentieth century, with primary emphasis on western thinkers. Particular attention is given to theory as an historical and cultural phenomenon.(Cross-listed as PHIL 341, POLS 341)
Course Attribute(s): CoB: Social Science

SJST 344 - Sociology of Deviance 4 hours. Deviance is presented as an aspect of the normal functioning of a society. This course is a study of the processes by which attitudes and behaviors are defined as deviant, and by which those labels are applied to individuals. Prerequisite: SOCI 110 or ANTH 110. (Cross-listed as SOCI 344)
Course Attribute(s): CoB: Social Science

SJST 346 - Sociology of Sex and Gender 4 hours. In this course we examine the concepts of sex and gender as they are defined in sociological literature, focusing on how social contexts (i.e., education, employment, family, sexuality and reproduction, etc.) construct gender which, in turn, shapes future opportunities for individuals in society.. Prerequisite: SOCI 110 or ANTH 110. (Cross-listed as SOCI 346, WGST 346)
Course Attribute(s): CoB: Social Science

SJST 355 - Power, Privilege, and Inequality 4 hours. This course investigates the multiple hierarchies defined by social class, race/ethnicity, gender, and sexuality and the consequences of one's location in them. Current data are examined on the unequal distribution of power, property, and prestige in American society. Guided by social scientific scholarship on stratification, emphasis is on intersectionality theory to explain systems of privilege. Prerequisite: SOCI 110 or ANTH 110. (Cross-listed as SOCI 355)

SJST 356 - Social Movements 4 hours. This course explores the experiences of social movements that struggle for justice and societal transformation along lines of class, race, ethnicity, gender, sexuality, religion, and more. Why do they emerge? How do they organize and operate? Why do they succeed or fail? (Cross-listed as POLS 356, SOCI 356)
Course Attribute(s): CoB: Social Science

SJST 382 - Gender and Art History: Feminist Art in a Global Frame 4 hours. This course examines 20th and 21st century art and media that engage with feminist and gender issues in a global context. The first few weeks are spent reviewing a concise history of first- and second-wave feminist thought, particularly its relation to art and visual culture. Thereafter, selected contemporary art from all regions of the globe are covered. Cross-listed as ARTH 382, WGST 382)
Course Attribute(s): AU: Global Perspective, CoB: Humanities

SJST 385 - Internship 1-4 hours.

SJST 400 - Special Topics in Social Justice Studies 1-4 hours. In this course topics in Social Justice Studies are explored. Topics vary from term to term.

SJST 425 - Wealth and Inequality 4 hours. This course explores the distribution of wealth and inequality from the economic and policy perspectives. We seek to understand how wealth and income are measured and ask what ae their distributed concerns, and what conclusions can we draw concerning inequality? Prerequisite: Junior/Senior standing or permission of instructor. (Cross-listed as ECON 425)
Course Attribute(s): CoB: Social Science

SJST 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

SJST 456 - Human Development: Exceptionality 3 hours. This course covers the range of physical, cognitive, communication, and social/emotional exceptionalities in human development from childhood to early adulthood. One focus is on the commonalities, not just the differences, between children and youth with disabilities and their nondisabled peers. A second focus is on understanding the different contexts of disability. Prerequisites: EDUC 230 and 231 and declaration of minor in education, or permission of instructor. (Cross-listed as SPED 456)
Course Attribute(s): CoB: Social Science

SJST 465 - Gender, Race, Class and Media 4 hours. This course investigates how women and minorities (including sexual minorities) are covered/portrayed by the news and entertainment media and how underlying economic, political and sociological factors affect such coverage. It explores how media portrayals influence the public's views regarding women and minorities and how women and minorities view themselves. And it examines critics' charges that the media portray women and minorities in a negative light and strategies used to counteract possible resulting harm. Prerequisite: COMM 110 or permission of instructor. (Cross-listed as COMM 465, WGST 465)
Course Attribute(s): CoB: Social Science

Sociology
SOCI 110 - Introduction to Sociology 4 hours. This is the foundation course in sociology, covering the basic concepts needed for a sociological understanding of society. These include culture, socialization, deviance, social stratification, race and ethnicity, gender, sexuality, families, social movements, and social change. The course is designed primarily for first year students. (Cross-listed as SJST 110)
Course Attribute(s): CLAS: (E3) Soc Sci-Soc/Anth, CoB: Social Science, SoAD: Humanities-'Other'

SOCI 200 - Special Topics 1-4 hours. An open course, varying in content from year to year, which allows for concentration on such specialized areas as Political Sociology, Demography, Criminology, Social Change, Stratification, and the like. Prerequisites: SOCI 110 or ANTH 110 or permission of instructor. (Sufficient demand)

SOCI 214 - Environment, Politics and Society 4 hours. This course examines multiple trajectories of environmental change in the United States since the dawn of the industrial age,

explores the basic societal forces that drive processes of environmental decay today, and explores major environmental issues/controversies at the center of contemporary debate. (Cross-listed as ENVS 214, POLS 214)
Course Attribute(s): CoB: Social Science

SOCI 230 - Introduction to Data Analysis and Statistics 4 hours. This course is an introduction to statistics and data analysis for students in the social sciences, covering the nature of variables, descriptive statistics, probability, and inferential statistics. Students learn to use a statistical software program to analyze large data sets to further their understanding of the importance of data analytics to an examination of social and political life. (Cross-listed as POLS 230)
Course Attribute(s): CLAS: (03) Quant Reasoning, CoB: Quant Reasoning

SOCI 235 - Socialization 4 hours. An inquiry into the processes by which social actors learn the norms, behaviors, and patterns of attention appropriate to their positions in society. Topics discussed include: "nature versus nurture," theoretical approaches to socialization, social structure, and socialization in adult life. The relationship between socialization and other sociological concepts, such as gender, social class, and occupation are discussed. Prerequisite: SOCI 110 or ANTH 110. (Alternate years).
Course Attribute(s): CoB: Social Science

SOCI 236 - Cults, Sects and the Main Line 4 hours. A scientific approach to the universal phenomenon of religion in human society. How does one approach such a study? What is "religion?" What function does religion supply in the maintenance of society? Are there alternative belief systems equally functional? What kinds of people are drawn to various types of religious expression? What is the place of religion in the society of the future? Prerequisites: SOCI 110 or ANTH 110 and junior or senior standing, or permission of instructor. (Alternate years)
Course Attribute(s): CoB: Social Science

SOCI 237 - Media and Politics 4 hours. This course examines the relationship between mass media and politics. We will explore the ways in which mass communications media shape the politics of elections, daily governance, U.S. foreign policy, interest groups, social movements, and identity. (Cross-listed as COMM 237, POLS 237)
Course Attribute(s): CoB: Social Science

SOCI 242 - Social Problems 4 hours. Current social issues discussed and analyzed from a sociological perspective. Issues vary each term but may be drawn from the following: population and the environment; work and alienation; education; health; leisure, social welfare, and other areas. Prerequisite: SOCI 110 or ANTH 110. (Sufficient demand)
Course Attribute(s): CoB: Social Science

SOCI 245 - Crime and Society 4 hours. This introductory course provides students with a foundational understanding of the American criminal justice system. In this course, students learn about the empirical reality of crime, including categories and patterns of offending, as well the primary actors involved in the criminal justice process. Heavy emphasis is placed on a critical examination of the conflicts and contradictions of this system and an assessment of social responses to crime. Prerequisite: SOCI 110 or ANTH 110.
Course Attribute(s): CoB: Social Science

SOCI 253 - Social Welfare Institutions 4 hours. Examines social welfare institutions in the context of change brought about by industrialization and urbanization. Focus on types of welfare, welfare policy and the structure of services. (Cross-listed as WGST 253)
Course Attribute(s): CoB: Social Science

SOCI 343 - Race and Ethnicity 4 hours. A discussion of theory and research concerning racial and ethnic relations in the United States and in various parts of the world.
Course Attribute(s): AU: Global Perspective, CoB: Social Science

SOCI 344 - Sociology of Deviance 4 hours. Deviance is presented as an aspect of the normal functioning of a society. This course is a study of the processes by which attitudes and behaviors are defined as deviant, and by which those labels are applied to individuals. Prerequisite: SOCI 110 or ANTH 110. (Cross-listed as SJST 344)
Course Attribute(s): CoB: Social Science

SOCI 346 - Sociology of Sex and Gender 4 hours. In this course we examine the concepts of sex and gender as they are defined in sociological literature, focusing on how social contexts (i.e., education, employment, family, sexuality and reproduction, etc.) construct gender which, in turn, shapes future opportunities for individuals in society. Prerequisite: SOCI 110 or ANTH 110. (Cross-listed as SJST 346, WGST 346)
Course Attribute(s): CoB: Social Science

SOCI 348 - Sociology of Families 4 hours. An investigation of the relationship between the family and other social institutions, particularly in regard to the family functions of population maintenance, socialization and social placement. Prerequisite: SOCI 110 or ANTH 110. (Cross-listed as WGST 348)
Course Attribute(s): CoB: Social Science

SOCI 355 - Power, Privilege, and Inequality 4 hours. This course investigates the multiple hierarchies defined by social class, race/ethnicity, gender, and sexuality and the consequences of one's location in them. Current data are examined on the unequal distribution of power, property, and prestige in American society. Guided by social scientific scholarship on stratification, emphasis is on intersectionality theory to explain systems of privilege. Prerequisite: SOCI 110 or ANTH 110. (Cross-listed as SJST 355)

SOCI 356 - Social Movements 4 hours. This course explores the experiences of social movements that struggle for justice and societal transformation along lines of class, race, ethnicity, gender, sexuality, religion, and more. Why do they emerge? How do they organize and operate? Why do they succeed or fail? (Cross-listed as POLS 356, SJST 356)
Course Attribute(s): CoB: Social Science

SOCI 400 - Special Topics 1-4 hours. An open course, varying in content from year to year, which allows for concentration on such specialized areas as Political Sociology, Demography, Criminology, Social Change, Stratification, and the like. Prerequisites: SOCI 110 or ANTH 110 and junior or senior standing or permission of instructor. (Sufficient demand)

SOCI 420 - Social Theory: A Survey 4 hours. An examination of contemporary theoretical schools, e.g. symbolic interactionism, structural functionalism, exchange and conflict, and ethnomethodology. Special attention devoted to the precursors and contemporary representatives of the respective schools. Prerequisite: SOCI 110 or ANTH 110 or permission of instructor. (Cross-listed as POLS 420) (Offered Fall, odd years)
Course Attribute(s): CoB: Social Science

SOCI 431 - Research Design and Strategies 4 hours. This course examines the methods by which social science researchers generate new knowledge and covers major data collection designs, sampling techniques, and measurement strategies. Students spend the semester developing their research skills and designing their own research proposals. Prerequisite: SOCI/POLS 230. (Cross-listed as POLS 431)
Course Attribute(s): CoB: Social Science

SOCI 450 - Independent Study 1-4 hours. Work on some topic not covered in any established course chosen by the student in consultation with the instructor. Work under this title may be carried out alone, in cooperation with other departments, or in an honors colloquium where a common problem is chosen. Approved Plan of Study and permission of departmental staff required.

SOCI 470 - Application of Sociology Field Work 2-4 hours. Field work associated with social services, corrections, health care, or educational agencies. Weekly class-workshop sessions and individual field work. Focus on the student's relationship with colleagues, professionals, and the public in various accredited institutional settings. Prerequisite: junior or senior standing and permission of instructor. (Sufficient demand)

SOCI 495 - Global Issues Seminar 4 hours. This integrative capstone course allows seniors to study a variety of global issues in-depth and to present the results of their own particular global experiences and studies. Topics examined will vary from year to year. The seminar may be focused on a central theme or on a variety of issues, depending upon the students' international interests and the instructor's discretion. Prerequisites: GLBS 101; Study Abroad; senior standing. (Cross-listed as ANTH 495 and GLBS 495)
Course Attribute(s): AU: Global Perspective, CoB: Social Science

Spanish
SPAN 101 - Spanish I 4 hours. Introduction to the language and culture of the Spanish-speaking world: speaking, reading, understanding and writing. Practice in language lab. Emphasis on communicative skills. Assumes no prior knowledge of the language. Not open to students with credit in SPAN 102 or the equivalent.
Course Attribute(s): CLAS: (02) Foreign Language, CoB: Humanities

SPAN 102 - Introductory Spanish II 4 hours. This course builds on Introductory Spanish I, increasing students' communicative skills and exploration of Spanish-speaking cultures. Students improve their proficiency in speaking, listening, writing and reading Spanish through engaging in class activities, in the language lab and with independent work. Students learn to perform practical tasks like ordering in restaurants, dressing, visiting others, and making living arrangements. Prerequisite: SPAN 101, 41-60% on Spanish Language Placement Exam, or permission of instructor.
Course Attribute(s): CLAS: (02) Foreign Language, CoB: Humanities

SPAN 200 - Special Topics 1-4 hours. Subject matter not covered in other courses. Topics vary from one semester to another.
Course Attribute(s): CoB: Humanities

SPAN 201 - Intermediate Spanish III 4 hours. Students integrate and expand on structures and vocabulary, developing cultural awareness through literature, video and online materials. Participation in three weekly classes with their professor and one weekly conversation group with an international teaching assistant increases students' language skills proficiency. Prerequisite: SPAN 102, 61% or higher on Spanish language Placement Exam, or permission of instructor. (Every fall semester)
Course Attribute(s): CLAS: (02) Foreign Language, CoB: Humanities

SPAN 202 - Intermediate Spanish IV 4 hours. 5Students complete their integration of basic structures and vocabulary, increasing cultural understandings through literature, video and online materials. Participation in three weekly classes with their professor and one weekly discussion group with an international T.A. develops students' oral and written expression. This course may be taken as the elective for the Spanish minor. Prerequisite: SPAN 201 or permission of instructor. (Every spring semester)
Course Attribute(s): CLAS: (02) Foreign Language, CoB: Humanities

SPAN 213 - Speaking the Unspeakable: Argentina's Literature of Dictatorship 4 hours. This course introduces literary representations of state violence and resistance during the Argentine military dictatorship of the 1970s and 1980s. We engage in close readings of a variety of literary genres, including novels, short stories, autobiography, and testimonial literature. We combine literary readings with study of historical and theoretical texts in order to deepen our understanding of state terrorism, resistance, trauma, memory, and justice. The course is conducted in English, including the readings and films. (Cross-listed as GLBS 213, SJST 213)
Course Attribute(s): AU: Global Perspective, CLAS: (A) Literature, CoB: Social Science

SPAN 216 - Cuba Close Up: Film since the Revolution 4 hours. 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. (Cross-listed as GLBS 216, WGST 216)
Course Attribute(s): AU: Global Perspective, CLAS: (C) The Arts, CoB: Humanities

SPAN 217 - Exiled from Justice: Equatorial Guinean Writers in Africa and Spain 4 hours. Students explore Equatorial Guinea’s literature in the context of its colonial relationship to Spain and its postcolonial position in Africa. Students study the history of Equatorial Guinea, located on the central west African coast, as well as the impact of its wealth of petroleum on development since independence from Spain in 1968.The writers and artists of Equatorial Guinea, residing either in Africa, Spain, or Latin America, create and challenge

the definitions of Guineidad as they advocate for justice and a return to a homeland whether literal or metaphorical. Spanish majors/minors will complete some readings in Spanish and complete written work in Spanish. Class is conducted in English. Readings are all available in English. (Cross-listed as SJST 217)
Course Attribute(s): AU: Global Perspective, CLAS: (A) Literature, CoB: Humanities

SPAN 218 - The Bombs and Ballots of Basque Literature in Spain 4 hours. This course explores Basque cultural production in the context of Basque nationalist terrorism in Spain. The political context of this parliamentary monarchy and the history of ETA, the Basque nationalist terrorist organization, frames the close reading of Basque poems, short stories, movies and a novel. Does this cultural production provide for its readers the definition of the contemporary Basque nation?
Course Attribute(s): AU: Global Perspective, CLAS: (A) Literature, CoB: Humanities

SPAN 220 - Literatura Infantil y Juvenil 4 hours. This course provides multiple approaches to the literary production for children and young adults in Spain. Students acquire the tools for potential teaching uses of literature written for a younger target audience. The social and cultural contexts of the included works create the foundation for our study. Students develop the critical thinking skills necessary for expression of their analyses of the texts they read. Children's and Young Adult Literature of Spain is taught in entirely Spanish with a limited number of bilingual and/or English readings.
Course Attribute(s): CLAS: (A) Literature

SPAN 300 - Special Topics 1-4 hours. Subject matter not covered in other courses. Topics vary from one semester to another.
Course Attribute(s): CoB: Humanities

SPAN 301 - Advanced Conversation and Composition 4 hours. In this workshop-style course, students practice the styles and mechanics of writing and speaking in academic, professional, and informal contexts. Authentic Hispanic cultural materials are the basis for students? essays, speeches, and informal conversation. This course is required for the Spanish major and minor. Prerequisite: SPAN 202 or permission of instructor. (Every fall semester)
Course Attribute(s): CoB: Humanities

SPAN 311 - Peninsular Culture and Literature I: Medieval - Eighteenth Century 4 hours. An introduction to canonical cultural works of Spain from the Middle Ages through the eighteenth century. Cultural discourse placed in context with socio-historical periods. Essays, literature, videos and/or films. Predominantly in Spanish.(Alternate years)
Course Attribute(s): CoB: Humanities

SPAN 312 - Peninsular Culture and Literature II: 19th - 20th Century 4 hours. An introduction to canonical cultural works of nineteenth-and twentieth-century Spain. Cultural discourse placed in context with socio-historical periods. Can be taken independently or as a continuation of SPAN 311. Course components predominantly in Spanish. (Alternate years)
Course Attribute(s): AU: Global Perspective

SPAN 315 - Latin American Culture and Literature I 4 hours. Students are introduced to Latin American culture and literature through analysis of art, architecture, and original texts from the pre-Colombian period to 1900. Films and historical readings enhance students' understanding of indigenous and Hispanic cultures, art, and politics in Latin America. The course is conducted in Spanish and may be taken as one of the core courses for the Spanish major and minor. (Alternate fall semesters)
Course Attribute(s): CoB: Humanities

SPAN 316 - Latin American Culture and Literature II 4 hours. Students are introduced to Latin American culture and literature through analysis of original texts from 1900 through the present. Films and historical readings facilitate students' engagement with literature in its socio-historical context, as well as enhancing students' ability to make connections between artistic and political movements. This course is conducted in Spanish and may be taken as one of the core courses for the Spanish major and minor. (Alternate spring semesters)
Course Attribute(s): AU: Global Perspective, CoB: Humanities

SPAN 360 - Literary Theory Seminar 4 hours. This course is intended to introduce students with a major or a minor in a foreign literature and language to Literary Theory and Criticism. Students use different types of theory to analyze texts in English and in their target language. This course is required of all foreign language and literature majors and is recommended for those students with a minor in a foreign language. Prerequisite: SPAN 202 or permission of instructor.
Course Attribute(s): CoB: Humanities

SPAN 400 - Topics in Hispanic Literature 1-4 hours. A study of the literary manifestations of socio-cultural areas such as religion, honor, love, politics, and individuality which are of concern to Hispanics. Taught in Spanish. (Sufficient demand.)

SPAN 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Independent study is required of Spanish majors. Approved Plan of Study required.

SPAN 485 - Internship in Spanish 1-4 hours. An off-campus project in consultation with faculty in the Division of Modern Languages. Students gain experience in a variety of careers involving Spanish and related fields. The internship must be conducted in Spanish. Requirements for this project include a journal, job evaluations, and a final report. May be taken during the summer or semester abroad. SPAN 202 or equivalent proficiency recommended.
Course Attribute(s): AU: Global Perspective

SPAN 490 - Modern Languages Senior Seminar 0 hours. In this seminar students have the opportunity to complete their electronic portfolio and prepare for an oral defense. In consultation with professors and peers, students select the documents to include in keeping with portfolio requirements. As part of this seminar, students write and revise their Senior Reflective Statement and their resume or curriculum vitae.

Special Education
SPED 456 - Human Development: Exceptionality 3 hours. This course covers the range of physical, cognitive, communication, and social/emotional exceptionalities in human development from childhood to early adulthood. One focus is on the commonalities, not just the differences, between children

and youth with disabilities and their nondisabled peers. A second focus is on understanding the different contexts of disability. Prerequisites: EDUC 230 and 231 and declaration of minor in education, or permission of instructor. (Cross-listed as SJST 456)
Course Attribute(s): CoB: Social Science

Women's and Gender Studies
WGST 101 - Women and Gender in Society 4 hours. This interdisciplinary course is the foundation of Women's and Gender Studies. It examines the relationships of women and gender worldwide to institutions and developments in the social, cultural, political, and economic spheres. Topics may include: the origins and development of modern feminism; gender and sexuality; progress and challenges for women and girls worldwide; reproductive justice and healthcare; women and work; sexual harassment and sexual assault; masculinities; gender in popular culture and the arts; the intersections of gender, class, race, and age; women and religion; women and leadership; and women and athletics. (Cross-listed as SJST 201)
Course Attribute(s): CoB: Social Science, SoAD: Humanities-'Other'

WGST 200 - Special Topics 1-4 hours. Topics vary in content from term to term.

WGST 201 - Gender and Leadership 2 hours. In this course, members of the Women's Leadership Academy explore leadership theory and issues of gender and leadership. We examine questions such as: what qualities make an effective leader, why are so few women in leadership roles in certain professions, and what might feminist theory or chaos theory have to do with leadership? We approach these questions from both a personal and academic perspective. Participants assess their own leadership style and develop a personal philosophy of leadership. Class assignments include team-building activities and attendance at skill-building workshops. Prerequisite: Membership in the Women's Leadership Academy and instructor's permission.

WGST 211 - Women in Theatre, Society and Politics 3 hours. A survey course tracing the role(s) of women in theatre - audience, acting, directing, writing, designing, managing - from the ancient Greeks to contemporary times in a range of cultures. Representative plays, essays, and production artifacts are studied to discover the changing roles of women. (Cross-listed as THEA 211)
Course Attribute(s): CoB: Humanities

WGST 216 - Cuba Close Up: Film since the Revolution 4 hours. 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. (Cross-listed as GLBS 216, SPAN 216)
Course Attribute(s): AU: Global Perspective, CLAS: (C) The Arts

WGST 253 - Social Welfare Institutions 4 hours. Examines social welfare institutions in the context of change brought about by industrialization and urbanization. Focus on types of welfare, welfare policy and the structure of services. (Cross-listed as SOCI 253)
Course Attribute(s): CoB: Social Science

WGST 254 - Women Writers 2 or 4 hours. A course that examines issues of language, gender, and culture portrayed through the lens of the woman writer. Texts may include novels, stories, autobiographies, essays, letters, and poetry. (Cross-listed as ENGL 254, SJST 254)
Course Attribute(s): CLAS: (A) Literature, SoAD: Humanities-'Other'

WGST 256 - Multicultural American Literature 4 hours. This course explores the rich diversity of American literature, raising questions like What does it mean to be or become American? What is gained, what is lost, what can be protected or preserved? What is the meaning of the past, of roots, of traditions? Students examine how this body of literature reimagines the dominant American culture and reflect on their own multicultural competence. (Cross-listed as ENGL 256, SJST 256)
Course Attribute(s): CLAS: (A) Literature, CoB: Humanities, SoAD: Humanities-'Other'

WGST 300 - Special Topics 1-4 hours. Topics vary in content from term to term.

WGST 305 - Gender and Organizations 3 hours. This course builds an understanding of gender issues within organizations as well as policies that organizations can implement to create a more equitable work environment. Topics of discussion encompass the impact of gender on communication, influence, and perceptions of competence, what progress has been made regarding gender equality and what still remains to be resolved. (Cross-listed as MGMT 305)
Course Attribute(s): CoB: Social Science

WGST 318 - Gender Equity in Business 3 hours. In this course we explore gender equality issues in leadership. Students examine the challenges/opportunities for women at various phases of careers/levels. This includes the socio-cultural, psychological, organizational, political, and economical issues facing women in business today with reflection on students' experiences. (Cross-listed as MGMT 318)

WGST 320 - Parenting Seminar 2 hours. This course provides students with an opportunity to learn about effective parenting through reading of literature and group discussion. The course explores a wide variety of issues, concerns, and problems that parents often face as well as the joy and gratification that effective parenting brings. Prerequisite: PSYC 101. (Cross-listed as PSYC 320)
Course Attribute(s): CoB: Social Science

WGST 324 - Queer American History 4 hours. What is queer history? Why write it? Who should be included? This course addresses the possible content and theoretical issues in the study of lesbian, gay, bisexual, and trans people in America since the seventeenth century. Prerequisite: sophomore standing or permission of instructor. (Cross-listed as HIST 324)
Course Attribute(s): CoB: Humanities

WGST 346 - Sociology of Sex and Gender 4 hours. In this course we examine the concepts of sex and gender as they are defined in sociological literature, focusing on how social contexts (i.e., education, employment, family, sexuality and reproduction, etc.) construct gender which, in turn, shapes future opportunities for individuals in society. Prerequisite: SOCI 110

or ANTH 110. (Cross-listed as SOCI 346, SJST 346)
Course Attribute(s): CoB: Social Science

WGST 348 - Sociology of Families 4 hours. An investigation of the relationship between the family and other social institutions, particularly in regard to the family functions of population maintenance, socialization and social placement. Prerequisite: SOCI 110 or ANTH 110. (Cross-listed as SOCI 348)
Course Attribute(s): CoB: Social Science

WGST 351 - Human Sexuality 4 hours. In this course we discuss sexual attitudes and behavior, gender roles, love and intimacy, contraception and abortion, pregnancy and childbirth, marriage and family life, variations in sexualities, STDs, and the many psychological and cultural factors that affect human sexual behavior. (Cross-listed as PSYC 351)
Course Attribute(s): CoB: Social Science

WGST 372 - Psychology of Gender 4 hours. This course examines the psychological, biological, social, and life-span development differences and similarities of the genders. Topics include cognitive abilities and achievement, personality characteristics, work issues, violence prevention, love relationships and sexualities, reproductive concerns, and physical and mental health issues. Prerequisite: PSYC 101. (Cross-listed as PSYC 372)
Course Attribute(s): CoB: Social Science

WGST 382 - Gender and Art History: Feminist Art in a Global Frame 4 hours. This course examines 20th and 21st century art and media that engage with feminist and gender issues in a global context. The first few weeks are spent reviewing a concise history of first- and second-wave feminist thought, particularly its relation to art and visual culture. Thereafter, selected contemporary art from all regions of the globe are covered. (Cross-listed as ARTH 382, SJST 382)
Course Attribute(s): AU: Global Perspective, CoB: Humanities

WGST 400 - Special Topics 1-4 hours. Topics vary in content from term to term.

WGST 408 - Women Writers in the Middle Ages 4 hours. This course examines the writings of medieval women - abbesses, merchants, wives, mothers, and mystics - to explore the challenges female writers such as Heloise, Margery Kempe, Julian of Norwich, and Christine de Pizan presented to orthodox Christianity, to gender stereotypes, and to medieval political and social structures. (Cross-listed as ENGL 408)
Course Attribute(s): CoB: Humanities

WGST 412 - Gender and American Film 4 hours. This course is an overview of how mainstream, artistically and/or popularly successful Hollywood films reflect gender images expressed in stereotypes, power relationships, and sexuality. The class examines gender as a social construct. The goal is to amass a working knowledge of the theories associated with gender and film criticism as well as to determine how students have been influenced by these cinematic representations. (Cross-listed as COMM 412)
Course Attribute(s): CoB: Humanities

WGST 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required. The end of this course of study must include a public presentation, such as an oral thesis defense, a Women's and Gender Studies Roundtable, the Undergraduate Research Forum or an art exhibition/performance.

WGST 465 - Gender, Race, Class and Media 4 hours. This course investigates how women and minorities (including sexual minorities) are covered/portrayed by the news and entertainment media and how underlying economic, political and sociological factors affect such coverage. It explores how media portrayals influence the public's views regarding women and minorities and how women and minorities view themselves. And it examines critics' charges that the media portray women and minorities in a negative light and strategies used to counteract possible resulting harm. Prerequisite: COMM 110 or permission of instructor. (Cross-listed as COMM 465, SJST 465)
Course Attribute(s): CoB: Social Science

WGST 475 - Women's Leadership Academy Practicum 2 hours. The practicum is a semester-long experience in active, authentic leadership around a service project conducted by members of the Women's Leadership Academy. This course is taken twice for credit. Prerequisite: WGST 201.

WGST 481 - International Women Writers 4 hours. In this course we explore literature written by contemporary women from different cultures. Study focuses on voice, content, and style, with some attention to the conditions in which the work was produced and to its reception.(Cross-listed as ENGL 481)
Course Attribute(s): AU: Global Perspective, CoB: Humanities

WGST 485 - Internship 1-4 hours.

Courses Offered by the School of Art and Design

Studio Art

ART 101 - Foundation I 8 hours. All BFA students are required to take Foundation. The year-long experience is an expansive course in studio practice and field experience focused on hands-on skill building using low-tech materials to cultivate an understanding of basic artistic principles, idea and concept evolution. Studio practice is augmented by personal research, studies in art history and contemporary art practice. BFA candidates are accepted into that program via portfolio review and academic qualifications.
Course Attribute(s): SoAD: Studio Requirement

ART 102 - Foundation II 8 hours. All BFA students are required to take Foundations II, a series of four, rotating, topic-specific studio workshops conducted by Art & Design faculty. These workshops address 2-D, 3-D, and 4-D Concepts. Topics vary from year to year. BFA candidates are accepted into that program via portfolio review and academic qualifications. Prerequisite: ART 101.
Course Attribute(s): SoAD: Studio Requirement

ART 111 - Beginning Drawing 4 hours. Studio work in painting and drawing. A general course for beginners investigating the individual's ideas in various media.
Course Attribute(s): CLAS: (C) The Arts

ART 114 - Beginning Graphic Design 4 hours. This is a course for students working outside the field of art who are interested in learning about the practice of design using digital tools such as Photoshop, In Design, and Illustrator. Students produce projects

based on the relationship between image and text, poetry and typography, and poster design. No prior experience in the arts or computer software is necessary.
Course Attribute(s): CLAS: (C) The Arts

ART 121 - Beginning Sculpture 4 hours. A course focusing on idea development, using both traditional and nontraditional three-dimensional materials.
Course Attribute(s): CLAS: (C) The Arts

ART 122 - Beginning Glass Studio 4 hours. A course focusing on idea development using both traditional and non-traditional three-dimensional applications of blown, slumped, and cast glass.
Course Attribute(s): CLAS: (C) The Arts

ART 133 - Beginning Photography 4 hours. The focus of this course is basic digital photography skills including camera function, color correction, organizing and editing images and inkjet printing. Through assignments, discussion of readings, lectures on historic and contemporary artists using photography, and critiques, students examine how photographs function in order to engage in critical discourse with the medium. A fully manual, digital single lens reflex camera (DSLR) and portable hard drive are required.
Course Attribute(s): CLAS: (C) The Arts

ART 151 - Beginning Ceramics 4 hours. This course offers a preliminary approach to ceramics for students not enrolled in the BFA program. Students are introduced to fundamental methods of making, decorating, and firing. Additional work outside of class required.
Course Attribute(s): CLAS: (C) The Arts

ART 161 - Beginning Printmaking 4 hours. Students are introduced to the medium and language of printmaking through hands-on demonstrations and technical and conceptual assignments. Discussions, critiques, readings and slide shows/movies add to the student's knowledge of printmaking and expose students to the versatility of the medium.
Course Attribute(s): CLAS: (C) The Arts

ART 200 - Special Topics in Art 2-4 hours. Theory or other elective credit topics are explored Does not count toward BFA studio requirements.

ART 201 - Introduction to Handbuilding 4 hours. This course covers an extensive range of clay construction processes exclusive of the wheel. Fundamental problems in ceramics such as timing, gravity and weight are experienced in assignments that explore basic sculptural concepts. Students are introduced to historic and contemporary models to understand the possibilities offered by ceramic materials. Basic ceramic processes from glaze mixing to kiln firing are experienced within the context of experimental materials exploration.
Course Attribute(s): SoAD: Studio Requirement

ART 203 - Introduction to Wheel 4 hours. In this course, the potter's wheel is used as the forming process for making vessels expressive of the visual, tactile, and intellectual possibilities available through the medium. Provided is a direct experience with process and materials that teach necessary skills and techniques to enable students to correlate the hand and eye with the mind. The objective of the course is to help students develop creative ideas and concepts into works of art. Historical references are also explored.(Fall and Spring)
Course Attribute(s): SoAD: Studio Requirement

ART 212 - Introduction to Design Studio: Type and Image 4 hours. This core design studio course introduces students to graphic design through hands-on and process-oriented studio practice. A series of projects and exercises explore typography image-making. Emphasis is on visual literacy, critical thinking, craft, and empathy for audience experience. Problem solving embraces a wide variety of tools and materials. Studio practice includes digital equipment and design-related software such as InDesign, Photoshop, and Illustrator.
Course Attribute(s): SoAD: Studio Requirement

ART 213 - Introduction to Integrative Graphic Design 4 hours. Using professional digital imaging tools, this introductory course allows students to work creatively in the production of design-oriented projects including: motion graphics, typography, concrete poetry, poster design and vector systems. Students explore handmade techniques as well as digital. The course emphasizes both experimental and commercial research.
Course Attribute(s): SoAD: Studio Requirement

ART 218 - Introduction to Photography 4 hours. This course focuses on basic digital photography skills including camera function, color correction, organizing and editing images and inkjet printing. Through assignments, reading discussion, lecture and critique, students examine how photographs function in order to engage in critical discourse with the medium. A fully manual digital single lens reflex camera (DSLR) and a portable hard drive are required.
Course Attribute(s): SoAD: Studio Requirement

ART 225 - Introduction to Print Media 4 hours. This course is focused on image making and image processing in relation to experiencing a broad range of printmaking processes and forms. It provides an introduction to the tools, technologies, and concepts necessary to develop the skills to make images within a contemporary print framework. Practices including woodcut, etching, lithography, monoprints, and new digital inkjet print technologies will be investigated. Printed images will evolve by working with a combination of hand and digital processes, with ink and with computer software, thus allowing the print to be understood as both physical and electronic process. Ideas inherent to the process of printmaking such as reproduction, translation, synthesis, remixing, proofing, recombination, and collage form the basis for discussion and inquiry. (Fall and Spring)
Course Attribute(s): SoAD: Studio Requirement

ART 232 - Introduction to Video, Sound and New Media 4 hours. This course introduces the creative, technical and theoretical experience needed to explore video art, sonic composition and new media systems. Works take form as video works, experimental music, sound design, and introductory 3D animation. Experimentation is emphasized and students explore a wide range of digital, electronic and traditional art-making tools. No experience with computers or music composition required.
Course Attribute(s): SoAD: Studio Requirement

ART 246 - Introduction to Painting 4 hours. In this course students will be introduced to painting within a structure that allows for the concurrent development of their technical and conceptual skills. Through a series of projects designed to explore the richness of painting in oil and/or water media, student will work towards proficiency with paint and gain

confidence in the production and realization of ideas. Work will be done from observation, from the imagination, and from a variety of viewpoint and techniques. Discussions, reading, field trips, and critiques will enhance student's knowledge of the critical dialogs surrounding painting, and will expand the notion of what painting can be.
Course Attribute(s): SoAD: Studio Requirement

ART 255 - Introduction to Sculpture 4 hours. An introduction to the possibilities associated with contemporary sculptural practice, with an emphasis on the development of ideas and conceptual reasoning, and the safe usage of materials and processes. A wide range of techniques will be covered, including structure and fabrication, mold making and casting, and the consideration of space, site, interaction, and context. May not be repeated for credit. (Fall and Spring)
Course Attribute(s): SoAD: Studio Requirement

ART 262 - Introduction to Glass 4 hours. This course offers a survey of glass working techniques with an emphasis on conceptual development and material manipulation. Technical demonstrations in glass blowing, hot glass casting, kiln forming, and cold manipulation will be combined with conceptually based projects to create contemporary sculpture.
Course Attribute(s): SoAD: Studio Requirement

ART 265 - Summer Glass I 2 or 4 hours. This is an intensive course in glassblowing. Emphasis is on personal expression and skill development. Demonstrations, slides, and lectures center on traditional and non-traditional glass working techniques for the artist. Open to all levels. (Offered only in Summer; counts as elective or additional studio credit only)

ART 266 - Summer Glass II 4 hours. This class incorporates various ways to cast glass using methodologies tailored to the beginning and intermediate student. Using hot casting, kiln forming, ZirCar ceramic shell and pate de verre, the student is exposed to a varied breadth of techniques within this intensive, condensed course. (Offered only in Summer; counts as elective or additional studio credit only)

ART 268 - Summer Glass: Cast Light 4 hours. This is an intensive course covering cast glass, color theory, the therapeutic effects of colored light, and approaches and applications for at and design. Demonstrations include a broad range of techniques incuding flow casting, sand casting, resin bonded sand molds, cold working, and more. (Offered only in Summer; counts as elective or additional studio credit only)

ART 282 - Figure Drawing 4 hours. A study of the expressive possibilities of the human form through drawing. Students will explore the figure in many ways with a variety of drawing media. From anatomical study and gesture to portraiture and narrative, this course will investigate the powerful history of figurative art and its potential for individual expression. Fundamental drawing and visual language skills are stressed. This course fulfills the drawing requirement. Prerequisite: Completion of an Art Foundation Program or permission of instructor.
Course Attribute(s): SoAD: Studio Requirement

ART 283 - Drawing: Observation to Abstraction 4 hours. An investigation of the ways in which perceptual study can lead to pure abstraction. Through observational drawing and formal analysis, students will discover the abstract principles that exist in all visual imagery. Assignments cover a broad range of drawing techniques and concepts including biomorphic, geometric, and conceptual abstraction. The potential for abstraction to communicate ideas will be explored. Fundamental drawing and visual language skills are stressed. This course fulfills the drawing requirement. Prerequisite: Completion of an Art Foundation Program or permission of instructor.
Course Attribute(s): SoAD: Studio Requirement

ART 284 - Drawing: Analyzing Nature 4 hours. This course covers both technical and conceptual aspects of drawing through the investigation and analysis of natural forms. Subjects range from found objects in nature to microscopic materials, the landscape, and the human body. Emphasis is placed on integrating technical mastery of the visual elements of drawing with expressive content, while working with a wide variety of materials. Fundamental drawing and visual language skills are stressed. This course fulfills the drawing requirement. Prerequisite: Completion of an Art Foundation Program or permission of instructor.
Course Attribute(s): SoAD: Studio Requirement

ART 285 - Digital Drawing 4 hours. This course promotes an approach to drawing using digital formats that push the concept of computer beyond its status of "tool". We approach the computer as a creative partner seeking answers to the questions most appropriate for its use in drawing. Newly developed technique and vocabularies will be explored, including raster drawing, micro marking, pixel displacement, wave set processing, gradient manipulations, spectral graphics, autopoiesis, non-destructive editing, data base collage, aleatoric composition, tweening animation, video still frame manipulation, and serialism. Traditional drawing tools are used alongside experimental approaches. Prerequisite: Art Foundation Program (ART 101/102)
Course Attribute(s): SoAD: Studio Requirement

ART 289 - Robert C. Turner Gallery Internship 1-3 hours. Students work as interns in various capicities to provide creative leadership, programming, and management of the Robert C. Turner Gallery, the student-run gallery of the School of Art and Design. The instructor of record provides oversight and evaluation of internship activities. Repeatable for credit up to a total of 6.00 credit hours. Prerequisite: sophomore standing.

ART 290 - Wood Studio Practicum 2 hours. This course is an in depth investigation into wood fabrication useful to artists and designers. Open to all School of Art and Design students. May be repeated once for credit.

ART 291 - Metal Studio Practicum 2 hours. This course is an in depth investigation into metal fabrication useful to artists and designers. Open to all School of Art and Design students. May be repeated once for credit.

ART 292 - Wood Practicum 2 2 hours. This course combines analog and digital design/output processes in wood. Students focus on developing and integrating fluencies of common wood tools with small, affordable ShopBot routers and larger industrial scale CAD/CAM equipment in the 3D Digital Fabrication Lab. May be repeated one time for credit.

ART 293 - The Business of Art: Professional Practices 4 hours. This is a lecture-based study that explores the practical applications of the business of art including presentation,

documentation and career planning specific to studio art. This course covers professional practices in the fine art world as appropriate to emerging artists by providing a foundation of practical information to assist undergraduate and graduate studio majors in building a successful career.

ART 294 - Art Force 5: Social Justice Research, Design, Outreach 2 hours. This course will research and design community-based art, with each semester focusing on a different historical theme. Past themes have included suffragist movement, the Harlem Hellfighters, Harlem Renaissance. Students research assigned individuals and design one community outreach project to serve an identified community. (Offered Fall, Spring) (Cross-listed as SJST 294)

ART 300 - Special Topics in Art-Studio Requirement 1-4 hours. Topics and issues not covered in other junior studio courses are explored. Counts toward BFA studio requirement.
Course Attribute(s): SoAD: Studio Requirement

ART 301 - Ceramic Sculpture I 4 hours. This course emphasizes the rigorous development of conceptual skills with the goal of developing an individual approach to a full integration of ideas, material and process. Students are encouraged to experiment with different strategies, including installation work, mixed-media projects, and a variety of traditional ceramic techniques. Construction and firing techniques are explored as well. Prerequisite: ART 201 or 202. (Fall and Spring)
Course Attribute(s): SoAD: Studio Requirement

ART 302 - Ceramic Sculpture II 4 hours. Continuation of ART 301. Prerequisite: ART 201 or 202.
Course Attribute(s): SoAD: Studio Requirement

ART 303 - Ceramic Tile 4 hours. Ceramic tile is a potent form of artistic inquiry that offers students an alternative approach to clay not covered in traditional pottery or sculpture courses. The course challenges assumptions about tile, presenting ideas of space, shape modulation, movement, repetition, density, image, color and texture. Students will address problems involved in planning, fabricating, and installing large projects. Prerequisite: ART 201 or 202. (Fall or Spring)
Course Attribute(s): SoAD: Studio Requirement

ART 305 - Ceramic Pottery I 4 hours. Through an exploration of pottery form this course addresses artistic inquiry, studio practice, and the genre of functional ceramics. Issues relative to ceramic history, contemporary material culture, and craft theory are part of the dialogue. Primarily wheel based, these classes may also include casting and handbuilding systems. Prerequisite: ART 203. (Fall and Spring)
Course Attribute(s): SoAD: Studio Requirement

ART 306 - Ceramic Pottery II 4 hours. Continuation of Ceramic Pottery I. Prerequisite: ART 203; ART 305 recommended. (Spring)
Course Attribute(s): SoAD: Studio Requirement

ART 307 - Design ! Ceramics 4 hours. The production process is a central determining factor in the identity of any object. Use, feel, size, density, form, texture and color are all directly influenced by the process' characteristics. In this course we modify, adapt and combine methods of production as a way of defining and influencing the object made. The use of molds and creating series of work are central to the course. Both sculptural and utilitarian modes of thinking are welcome.
Course Attribute(s): SoAD: Studio Requirement

ART 308 - Ceramics: Hybrid Vessel I 4 hours. In this course we address perceptions of the vessel as a utilitarian, sculptural and conceptual object. Historical and contemporary contexts constitute premise for inquiry. Students create vessels defined as hybridized. Prerequisite: ART 201, 202, or 203.
Course Attribute(s): SoAD: Studio Requirement

ART 309 - Ceramic Systems II 4 hours. A further study of ceramic systems. ART 307 recommended.
Course Attribute(s): SoAD: Studio Requirement

ART 310 - Ceramics: Hybrid Vessel II 4 hours. Continuation of ART 308-Ceramics: Hybrid Vessel I. Prerequisite: ART 201, 202, or 203.
Course Attribute(s): SoAD: Studio Requirement

ART 312 - Design Studio: Typography 4 hours. This course focuses on type as image, type as information, and the interaction of type and image. We explore letterforms and writing systems propelled by the human need to represent things, to represent ideas, and to express ourselves. Projects include a variety of traditional and digital media. Students work with design-related software including InDesign, Illustrator, Photoshop, Dreamweaver, and FontLab. Prerequisite: ART 211 or permission of instructor.
Course Attribute(s): AU: Service Learning Courses, SoAD: Studio Requirement

ART 313 - Design Studio: Graphic Systems 4 hours. This advanced studio course focuses on design applications for complex, multifaceted projects and visual systems. Students learn how to design and produce holistic solutions for projects such as brand identities, wayfinding systems, symbol sets, and multiple component design projects. Prerequisite: ART 212.
Course Attribute(s): AU: Service Learning Courses, SoAD: Studio Requirement

ART 316 - Design and Marketing 4 hours. In this course we focus on how the processes, tools and practices of design and marketing work together to support and enhance business goals. Students work with the elements and principles of design to communicate an intended message to an intended target audience. Students also experience the creative and strategic power of the design process. Design and marketing faculty participate in lectures and demonstrations. The semester culminates in an integrated marketing campaign for a not-for-profit entity. This junior studio course is open to Art students and to Marketing majors and minors.
Course Attribute(s): SoAD: Studio Requirement

ART 321 - View Camera 4 hours. This course introduces students to black and white darkroom photography through the use of large-format cameras. Using monorail, 4x5 view cameras students learn the mechanics of the camera, develop new sheet film and make silver gelatin prints. Through lectures on contemporary artists, videos and related readings, students begin to synthesize technique and concept by developing their own projects. View cameras are provided. Prerequisite: ART 218.
Course Attribute(s): SoAD: Studio Requirement

ART 322 - Advanced Digital Photography 4 hours. This course provides an opportunity for students to go deeper into the digital skills they acquired in the introductory photography

course. Advanced digital editing, including tablet use, Photoshop, and layers and masks, offer students the possibility of creating seamless manipulations and the opportunity to explore the full potential of the digital platform. These techniques are presented through discussion of contemporary practice and culture. Prerequisite: ART 218.
Course Attribute(s): SoAD: Studio Requirement

ART 324 - Contemporary Photographic Practice 4 hours. This course explores the role of the contemporary photographer as maker, critic and organizer. Emphasis is placed on research and writing in conjunction with image making. As an introduction to independent studio work, students are expected to produce work regularly and critique of new work takes place every other week. Prerequisite: ART 218.
Course Attribute(s): SoAD: Studio Requirement

ART 325 - Advanced Print Media 4 hours. An extensive investigation into the traditional and non-traditional uses of materials and processes that grow out of the concepts inherent in kinetic, photographic and electronic printmaking processes. The focus is on issues involving specific forms of print media (book, print-suite, single print, mass production, CD-ROM, print installation). Time and instruction provided help to deepen students experience in one or more printmaking processes including etching, lithography, woodcut, and digital inkjet technologies. Content varies from instructor to instructor. At least one Sophomore Design, Video/Sonic, or Print Media Studio is required or permission of instructor. ART 225 highly recommended. May be repeated once for credit. (Fall and Spring)
Course Attribute(s): SoAD: Studio Requirement

ART 328 - Artists Multiples 4 hours. This advanced course explores ideas about artists' books and a wide range of printed multiple forms including objects, installations, CD-ROM and DVD. The notion of the multiple is explored in contrast to the traditional fine art print. Offset printing, traditional processes, and new emerging technologies will be utilized to produce work. Ideas inherent to the process of printmaking such as reproduction, translation, synthesis, remixing, proofing, recombination and collage will form the basis for discussion and inquiry At least one Sophomore Design, Video/Sonic, or Print Media Studio is required or permission of instructor. ART 225 highly recommended (Spring)
Course Attribute(s): SoAD: Studio Requirement

ART 329 - Digital Print Media 4 hours. An exploration of printing activities and techniques that question and expand the interfaces of the traditional print media of lithography, woodcut, and etching with contemporary digital imaging activities and techniques. Through the making of work we will look at how digital technologies affect the contemporary vocabulary of printmaking. We work with moving and still images and with images on paper as well as on the internet. We make, send and receive images as ways of understanding how ideas about print media are expanding, how these same ideas have historically been rooted in notions about communication, and how we can conceive and make print translations that cross traditional media. Prerequisite: At least one Expanded Media Sophomore Design, Video/Sonic, or Print Media Studio or permission of instructor. ART 225 highly recommended. (Fall)
Course Attribute(s): SoAD: Studio Requirement

ART 332 - Advanced Video Arts 4 hours. This course allows students to explore: video and sound production, video and sound editing, immersive video installation, video image processing and multi-channel video and sound projection. Students explore a wide range of contemporary and vintage electronic systems. Prerequisite: ART 232 or permission of instructor. May be repeated once for credit. (Fall and Spring)
Course Attribute(s): SoAD: Studio Requirement

ART 335 - Interactive Media Studio 4 hours. Explore technological processes that expand and complicate relationships of art and audience. Design responsive environments, 3D stereographics, "augmented realities" onsite and across networks. Develop generative systems that visualize, sonify, or animate data. Make your own software for "live cinema" performance. Prerequisite: One sophomore-level studio art course or permission of instructor.
Course Attribute(s): SoAD: Studio Requirement

ART 336 - Generative and Interactive Animation 4 hours. In this course students create dynamic motion graphics and animations in 2D and 3D spaces. We explore modeling techniques; applying models as virtual components of either cinematic or fully-abstract world of entities with behaviors ? culminating in generative animations, data visualizations, and interactive games. May be repeated one time for credit. Prerequisite: One of ART 285, ART 335, ART 340; or permission of instructor.
Course Attribute(s): SoAD: Studio Requirement

ART 339 - Sound Design 4 hours. In this course students learn to find, edit, process and combine sounds in many different ways. Coursework culminates in projects such as (but not limited to) radio play, sound for dance, ambient music, techno, folly sound and experimental electronic composition. No prerequisite and no experience in music or computers required.
Course Attribute(s): SoAD: Studio Requirement

ART 340 - Design for Web and Mobile Devices 4 hours. This course introduces students to the building blocks of design for the web and screen-based media. Students explore the application of design principles and the design process for screen-based media with emphasis on content, aesthetics, user experience and craftsmanship. Students learn the basics of computer languages for interactive graphic design. Exercises and projects develop skills in software applications including InDesign, Photoshop, Illustrator and Dreamweaver.
Course Attribute(s): SoAD: Studio Requirement

ART 346 - Junior Painting 4 hours. Junior painting involves intensive exploration into issues of painting and drawing with emphasis on the beginnings of each student's unique means of expression. It is a continuation of the basic painting experience begun in the sophomore year with concentration on problem solving through structured assignments. Students are encouraged to find ways of approaching common experience as well as developing independent work. Sessions are complimented by readings, critiques, presentations, and field trips. May be repeated. Course content varies from instructor to instructor. Prerequisite: ART 246. (Fall and Spring)
Course Attribute(s): SoAD: Studio Requirement

ART 348 - Junior - Mixing Materials 4 hours. From Picasso's cubist collages to Anselem Keifer's lead and straw works, the class combines both traditional and non-traditional painting and drawing materials that enhance narrative structures, work as

metaphoric transformations, and the creation of formal dynamic juxtapositions. Projects are designed to encourage exploration of new realms of expression. Prerequisite: ART 246. (Spring)
Course Attribute(s): SoAD: Studio Requirement

ART 349 - Water-based Media 4 hours. Students explore the use of watercolor, gouache, acrylic, and egg tempera and experiment with various supports and surfaces, including paper, grounds, canvas, panel, and more. Prerequisite: ART 246.
Course Attribute(s): SoAD: Studio Requirement

ART 355 - Sculpture Foundry: From Miniature to Monumental 4 hours. This junior level course examines the process and practice of contemporary cast metal sculpture. The aim is to provide a platform to develop and push the boundaries related to the art of Foundry. In a critically engaged studio environment, students develop concepts and explore casting in bronze, iron, steel, copper, aluminum, while engaging with a variety of mold-making and construction techniques, including lost wax and the patination of metals. Individual or collaborative projects from miniature to monumental may include object-based work or site-specific installations. May be taken twice for credit. Prerequisite: ART 255.
Course Attribute(s): SoAD: Studio Requirement

ART 361 - Glass Blowing 4 hours. An intermediate-level exploration of glass and combinations of glass and other media as they apply to sculpture. Concentration in hot glass and glass blowing techniques (including color techniques), and mold making. Projects are developed to foster self-determination of ideas in relation to media. Prerequisite: ART 262.
Course Attribute(s): SoAD: Studio Requirement

ART 362 - Advanced Glass Blowing 4 hours. A continuation of ART 361 that further develops personal expression in glass sculpture. Processes include glass blowing, solid working, mold making, and color, utilizing high-temperature glass enamels. Prerequisite: ART 361. (Spring)
Course Attribute(s): SoAD: Studio Requirement

ART 363 - Glass and Light 4 hours. This course is an in-depth investigation into the potential of light as a material and a comprehensive introduction to working with luminous tube technology --a normally commercial process--as a means of sculptural expression. The course examines neon's potential in combination with other materials both traditional and non-traditional as well as sealing, bending, processing of neon tubes, safe installation, and wiring. No prerequisite. (Spring)
Course Attribute(s): SoAD: Studio Requirement

ART 364 - Glass Casting 4 hours. An introductory investigation of personal expression through cast glass sculpture with an emphasis on mold making. Students learn open-faced solid glass casting using both loose and rigid sand molds. Topics range from the object and figurative sculpture to geometric abstraction and site-specific environments. (Fall)
Course Attribute(s): SoAD: Studio Requirement

ART 368 - Installation and Expanded Applications 4 hours. This course explores the aesthetic and conceptual possibilities of light and mixed media. Using traditional and non-traditional methods of neon-making, the emphasis is placed on the tension between contrasting materials when creating artworks.
Course Attribute(s): SoAD: Studio Requirement

ART 373 - Material Poetics in Dimensional Studies 4 hours. This course explores the relationship between material and meaning. Projects investigate the significant use of materials and context in service to ideas and develop material vocabulary as a means to shape the viewing experience. Prerequisite: ART 255 or permission of instructor.
Course Attribute(s): SoAD: Studio Requirement

ART 374 - Advanced Paper/Mixed Media 4 hours. Advanced Paper/Mixed Media involves intensive exploration into issues of art making with emphasis on the development of each student's unique means of expression. The course concentrates on problem solving, development of ideas, and conceptual possibilities within the contemporary art practice.
Course Attribute(s): SoAD: Studio Requirement

ART 375 - Space and Place 4 hours. This course explores the use of space (physical) and place (contextual) as materials for expression. Through experiential site research, students create installations, site-specific interventions, and public works. Making use of a variety of sculptural materials and processes they fit the needs of the projects and investigating site as an inspiration, venue, and medium. Prerequisite: ART 255 or permission of instructor.
Course Attribute(s): SoAD: Studio Requirement

ART 378 - Art and Ecology 4 hours. This class explores the intersection of art and ecology through the critical inquiry of student-directed investigations. Topics covered may include ecology, environmental art, sustainability, and community activism responding to local ecological issues through use of creative methodologies. Prerequisite: ART 255 or permission of instructor.
Course Attribute(s): SoAD: Studio Requirement

ART 380 - Alfred Summer Ceramics 4 hours. This summer course offers 4-weeks of comprehensive ceramic art experience. Students can enroll in the 4-week open studio intensive or two consecutive 2-week sessions. Students work independently with faculty oversight and guidance from Graduate Teaching Assistants. Individual work space is provided with wheels, tables and other basic equipment. Personal Development is emphasized. (This course may be taken twice for credit.)

ART 381 - Advanced Drawing 4 hours. A topical course providing students an intense immersion in both observational and conceptual drawing practices. Topics may include figure drawing, nature drawing, and drawing systems. May be repeated once for credit, preferably with a different instructor. Course content varies from instructor to instructor. (Fall)
Course Attribute(s): SoAD: Studio Requirement

ART 382 - Ceramic Materials I: Claybodies and Glazes 4 hours. This course covers the fundamentals of body and glaze development focusing on ceramic raw materials and their role in forming and firing for functional ware and sculpture bodies. Glaze formulations are also discussed, including glaze chemistry, texture, and causes of common defects. (Fall)

ART 383 - Ceramic Materials II: Problem Solving for Artists 4 hours. This is an open forum discussion-based course that builds on ART 382-Ceramic Materials I and stresses the application of ideas and concepts to solve studio problems. Students are expected to participate in the discussion, to bring examples of problems, and share the results of experiments to rectify those problems. Prerequisite: ART 382. (Spring)

ART 384 - Studio Lighting 2 hours. Principles of light and the clean-slate nature of the studio will be explored, along with subject, background, and studio tools. Digital camera fluency will provide necessary feedback. A self-directed project is required. Prerequisite: ART 218.

ART 385 - Internship 1-4 hours.

ART 387 - Introduction to 3D Modeling and Rapid Prototyping 2 hours. This course offers an introduction to digital fabrication techniques using computer-aided design and rapid prototyping equipment. Fundamental techniques in computer-aided design are developed through tutorials and in-class demonstrations which directly develop skills for creating 3D objects. May be repeated one time for credit (up to a total of 4 credit hours).

ART 388 - Methods in Electronic Arts 2 hours. This elective course is designed to introduce students to the primary software applications and concepts used in the preparation of a wide variety of print and digital media. The course will focus on acquiring the skills necessary to move easily between the most relevant page layout, imaging, video and sound software as well as developing skills in digital file and digital color management. This course is open to all students interested in expanding their knowledge and expertise of software used in the digital arts. It is strongly recommended for beginning as well as advanced students working in Design, Print Media, Sonic, Video and Interactive Arts. (Fall or Spring)

ART 389 - Exhibition Design 2 hours. This course is an introduction to concepts, skills, and methods required to design and install exhibitions of contemporary art in professional museum and gallery settings. Topics covered include exhibition planning, concept design, technical lighting, and proper handling, storage, and installation of artwork. Student gain firsthand experience installing an exhibition at the Cohen Art Center and proposing a mock exhibition for the Fosdick-Nelson Gallery with drawings and scale models. Field trips to area museums and galleries provide additional opportunities to study and analyze exhibition design and to meet with professional museum and gallery preparatory and curatorial staff.

ART 390 - Methods of Digital Output 2 hours. This course compliments ART 387-Intro to 3D modeling and Rapid Prototyping, allowing the student to acquire a practical application for 3D modeling through use of CAD (SolidWorks, Rhino), CAM (Delcam for SolidWorks, RhinoCam and Mastercam), and reverse engineering software (Rapidworks, Scanstudio). Students learn technical competency in contemporary technology for 3D fabrication. Prerequisite: ART 387 or ENGR 102. May be repeated one time for credit (up to a total of 4 credit hours).

ART 391 - Special Topics-Elective Credit 1-4 hours. Special topics that count only as elective credit toward the BFA or as additional studio credits are offered. Topics vary from term to term.

ART 392 - Individual Projects with Foundations Faculty 2-4 hours. Project or media based independent study with a faculty member in the foundations division. This course can only be used for elective credit; it does not replace sophomore, junior or senior studio requirements. Approved Plan of Study required.

ART 393 - Ceramic Art Individual Projects 2-4 hours. Project or media based independent study with a faculty member in the ceramic art division. This course can only be used for elective credit; it does not replace sophomore, junior or senior studio requirements. Approved Plan of Study required.

ART 394 - Sculpture and Dimensional Studies Individual Projects 2-4 hours. Project or media based independent study with a faculty member in the sculpture and dimensional studies division. This course can only be used for elective credit; it does not replace sophomore, junior or senior studio requirements. Approved Plan of Study required.

ART 395 - Expanded Media Individual Projects 2-4 hours. Project or media based independent study with a faculty member in the expanded media division. This course can only be used for elective credit; it does not replace sophomore, junior or senior studio requirements. Approved Plan of Study required.

ART 396 - Drawing, Painting, or Photography Individual Projects 2-4 hours. Project or media based independent study with a faculty member in the drawing, painting, photography division. This course can only be used for elective credit; it does not replace sophomore, junior or senior studio requirements. Approved Plan of Study required.

ART 397 - Glassartengine 2 hours. This is an interdisciplinary course between glass engineering students and glass art students. The course is taught by various faculty across both areas combining both technologies and philosophies to foster collaborations yielding unknown results. (Studio elective for art students; Technical Elective for engineering students.) May be repeated for credit up to a total of 8 credit hours. Prerequisite: One junior glass course (ART 361-366). (Cross-listed as CEMS 397)

ART 398 - Exhibition Design Individual Projects 2-4 hours. Project or media based independent study with a faculty member in exhibition design. This course can only be used for elective credit; it does not replace sophomore, junior or senior studio requirements. Approved Plan of Study required.

ART 399 - Glaze Effects and Color 4 hours. This course examines the nature and properties of materials that create special effects and color in glazes, with an intensive approach to the study and analysis of glazes. When taught as on online hybrid in a Fall or Spring semester, the course combines online instruction with a required on-campus laboratory component (ART 399L). There is no on-campus lab component when taught as an online course in Allen Term or Summer Term. May be repeated one time for credit (a total of 8 credit hours).

ART 400 - Special Topics in Art 1-4 hours. Theory or other elective credit topics are explored. Does not count toward BFA studio requirements.

ART 401 - Senior Studio 4-6 hours. Senior-level studio content involves individually driven studio practice and research guided by weekly meetings with studio advisors. Senior Studio culminates in the Senior Show as a capstone project that also includes an artist's statement and an exhibition project statement.
Course Attribute(s): SoAD: Studio Requirement

ART 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

ART 484 - Introduction to Kiln Procedures and Construction 4 hours. The focus of this lab/lecture course is the operation, maintenance and design of ceramic art based kilns. Discourses include: kiln theory, combustion, fuels, refractory materials, basic electrical theory and construction. Students design their own kiln using blueprints, calculations for heat input and a material source list.

ART 499 - Senior Show 0 hours. The culminating exhibit for the BFA degree. Prerequisite: 68-72 studio credit hours earned and senior standing in the BFA program.

Art History

ARTH 120 - Topics in Art History: Non-western 2 hours. Selected topics in non-western art history are covered. Topics vary from term to term.
Course Attribute(s): CLAS: (C) The Arts, SoAD: ARTH non-Western

ARTH 126 - Buddhist Arts of Asia 2 hours. This course is an exploration of Buddhist iconography and ritual revealed in art and monuments from South, Southeast, and East Asia. The focus is on the generation of meaning through sculpture, painting, and architecture.
Course Attribute(s): CLAS: (C) The Arts, SoAD: ARTH non-Western

ARTH 127 - Arts of Ancient India 2 hours. This course examines the artistic and architectural highlights of India from Indus Valley Culture to the 16th Century CE. We view the architecture, sculpture, and monuments of Buddhism and Hinduism, two of India's most ancient Religions.
Course Attribute(s): CLAS: (C) The Arts, SoAD: ARTH non-Western

ARTH 128 - Introduction to Material Culture 2 hours. THis course is an introduction to the study of material culture from prehistory to the present in global perspective. Themes include power and civilization; pleasure and leisure; trade and status; and exploration and modernity.
Course Attribute(s): CLAS: (C) The Arts, SoAD: ARTH non-Western

ARTH 130 - Topics in Art History: Ancient to Baroque 2 hours. Selected topics art history from ancient to baroque are covered. Topics vary from term to term.
Course Attribute(s): CLAS: (C) The Arts, SoAD: ARTH Ancient-Baroque

ARTH 133 - Renaissance and Baroque Art and Architecture: From the Classical Ideal to Theatrical Expression 2 hours. This course surveys the developments in architecture, sculpture and painting from the European Renaissance to Baroque periods (late 14th through 17th centuries). Works of art are studied as individual monuments related to the historical culture that produced them.
Course Attribute(s): CLAS: (C) The Arts, SoAD: ARTH Ancient-Baroque

ARTH 136 - The Role of the Medieval Image 2 hours. This course surveys the influences and development of Christian art from its beginnings in the early Christian period until the Gothic era by investigating the character and function of the image during the Middle Ages. Main themes include ritual, relics and veneration; pilgrimage; theology in art; and the age of cathedrals.
Course Attribute(s): CLAS: (C) The Arts, SoAD: ARTH Ancient-Baroque

ARTH 137 - Ancient Art: History, Legend, and Legacy 2 hours. This course provides a critical survey of ancient art. We focus on the great empires of antiquity--Babylonian and Egyptian, Greek and Roman--that emerged in the Near East and Mediterranean region.
Course Attribute(s): CLAS: (C) The Arts, SoAD: ARTH Ancient-Baroque, SoAD: ARTH non-Western

ARTH 140 - Topics in Art History: Modern 2 hours. Selected topics in modern art history are covered. Topics vary from term to term.
Course Attribute(s): CLAS: (C) The Arts, SoAD: ARTH Modern

ARTH 141 - 20th Century Art 2 hours. This class will provide a critical introduction to modern art. It will trace the contexts of modern art movements and explore key themes. We will look at a wide-range of art genres, including painting, sculpture, and photography.
Course Attribute(s): CLAS: (C) The Arts, SoAD: ARTH Modern

ARTH 143 - Art and Social Ideals 2 hours. This course will introduce students to the development of the concept of modernism in art and will focus on discussing examples of related utopian visions of an idealized past or an anticipated future.
Course Attribute(s): CLAS: (C) The Arts, SoAD: ARTH Modern

ARTH 144 - The Ideal Body 2 hours.
Course Attribute(s): CLAS: (C) The Arts, Creative Disc (not used), SoAD: ARTH Modern

ARTH 146 - Modern Sculpture 2 hours.
Course Attribute(s): CLAS: (C) The Arts, Creative Disc (not used), SoAD: ARTH Modern

ARTH 200 - Topics in Art History 1-4 hours. Topics vary from semester to semester. May be repeated for credit.
ARTH 210 - Global Perspectives: Paris 2 hours. This course enables students to develop an understanding and appreciation of another culture, first in the classroom, and then two weeks in Paris. The focus is on history, art, and contemporary culture. Open to all students. Applicable as elective credit only toward the BFA and the B.S. in Art History and Theory; does not apply to art history requirements. (Cross-listed as FREN 210, GLBS 210)
Course Attribute(s): AU: Global Perspective, AU: Travel Courses

ARTH 211 - Issues and Debates in Contemporary Art 3 hours. A topically structured, discussion-based thematic study of issues and debates relevant to major movements and developments in contemporary art. Students are introduced to vital, ongoing conversations within the School as well as a

variety of coexisting and competing opinions about investments in art. The course encourages students to develop, strengthen, and present their own views about art. Should be taken Fall Semester sophomore year.

ARTH 300 - Topics in Art History 4 hours. Topics vary from semester to semester. May be repeated for credit.
Course Attribute(s): CoB: Humanities

ARTH 304 - Global Arts: Contemporary Asia 4 hours. This course examines contemporary arts of Japan, China, North/South Korea, India, Pakistan, Tibet, and Vietnam, with a focus on emerging theories of global arts and diverse art practices, such as curating, viewing, and the making of Asian art today.
Course Attribute(s): AU: Global Perspective, CoB: Humanities

ARTH 305 - South Asian Arts 15-20c: Mughals to Modern 4 hours. This course examines the visual arts of the South Asian subcontinent from the Mughal period, in the 16th century, to modern art of the mid-20th century. In addition to religious and royal architecture, we view paintings, sculpture, courtly arts, prints and photography.
Course Attribute(s): CoB: Humanities

ARTH 306 - Arts of Japan 4 hours. This course is an introduction to Japanese visual arts, material culture, and architecture from prehistory to the present. Major monuments of Japan are analyzed according to their historical, social, and religious contexts. A field trip to study objects in the Johnson Museum Collection at Cornell University is part of the course. (Cross-listed as GLBS 306)

ARTH 307 - East Asian Design and Material Culture 4 hours. This course is a survey of ceramics, wood, metalwork, textiles and product design from the 15th century to the present in China, Korea and Japan. Emphasis is on aesthetics, production systems, social worlds and craft discourse. Cross-listed as GLBS 307) (Offered Fall, odd years)

ARTH 321 - Greek and Roman Art and Architecture 4 hours. This course introduces the architecture, painting, sculpture, pottery and other forms of material culture from Ancient Greece and Rome to further our understanding of the foundations of western civilization and western approaches to art, beauty and civic planning.
Course Attribute(s): CoB: Humanities

ARTH 322 - Medieval Art and Architecture 4 hours. This course explores medieval art--architecture, painting, sculpture and the decorative arts--through the study of subject matter and the major stylistic developments from the religious and secular spheres of medieval society. Other topics include patronage; artistic production; and workshop practices.
Course Attribute(s): CoB: Humanities

ARTH 324 - Medieval Illuminated Manuscripts 4 hours. This course surveys the role and development of illuminated manuscripts--hand-written, painted books--in Western Europe beginning with the seventh century and ending in the fifteenth century with the invention of the printing press.

ARTH 331 - Italian Renaissance Art and Architecture 4 hours. This course is an in-depth study of the major stylistic forms, directions and iconography in Italian Renaissance art and architecture (14th through 16th centuries). We explore the systems of art-making and patronage in the major urban and court centers.
Course Attribute(s): CoB: Humanities

ARTH 332 - Northern Renaissance Art 4 hours. This course is an examination of Northern Renaissance art (France, Germany, the Netherlands and England) from the 1400s until about 1600. The period is marked by an increase in the materialism of religious faith, most notably observed in the extravagant artistic patronage by the royal courts and the Church.
Course Attribute(s): CoB: Humanities

ARTH 333 - Baroque Art and Architecture 4 hours. This class is a survey of European art and architecture during the 17th century within cultural, religious, political and intellectual frameworks. Main themes include: the impact of the Counter Reformation on the visual arts; urban planning; art as propaganda; specialization of the art market; rise of art academies and art theory.
Course Attribute(s): CoB: Humanities

ARTH 342 - Primitivism: A Western Perspective 4 hours. This course will investigate the issue of primitivism, one of the major topics in modernism. We examine the problematic nature of primitivism, specifically artists' involvement in the broader discourse of colonialism. The class will critique a variety of art practices--including photographic mapping, "black deco" spectacle, ethnographic Surrealism--ranging from the mid 19th century to the present. Prerequisite: ARTH 211.
Course Attribute(s): CoB: Humanities

ARTH 343 - Modern Art 4 hours. Encompassing the movements of Symbolism to Surrealism, this course covers the developments in modern art during the first half of the 20th Century. Students explore such themes as modernity, primitivism, and utopian theory as well as the stylistic developments and formal innovations of this period.
Course Attribute(s): CoB: Humanities

ARTH 344 - In the Studio: Modern and Contemporary Painting 4 hours. This course investigates the facture of painting--the marking, process, and surface of work--through a series of case-studies from the late 19th century to the present. It is designed for graduate students enrolled in the Alfred-Dusseldorf MFA Program and advanced undergraduates.

ARTH 351 - In, of, and around Contemporary Craft 4 hours. This course investigates the nature and place of craft in modern culture. We traverse a century of craft-based practices--from the artisan guilds of the Arts and Crafts Movement to the virtual guilds of today--focusing on recent strategies and practices. Prerequisite: one 100-level art history course.
Course Attribute(s): CoB: Humanities

ARTH 352 - Contemporary Projects in Art 4 hours. This interactive course focuses on and studies the projects of selected contemporary artists. These projects serve as platforms for investigating issues and problems related to various contemporary art forms and movements including, the embodiment of the viewer, play and reality, new technologies and consciousness, ironic modernism, and the critique of the post-medium condition. This course can be substituted for ARTH 211 in the BFA curriculum.
Course Attribute(s): AU: Global Perspective, CoB: Humanities

ARTH 354 - Recent Sculptural Practices 4 hours. A series of recent projects exploring contemporary issues in sculpture will be the focus of this class. We will be looking an international array of artists, including: Matthew Barney (United States), Robert Irwin (United States), Juan Munoz (Spain), Doris Salcedo (Colombia), Thomas Schutte (Germany), and Rachel Whiteread (Britain). The work of these artists will be examined in the context of larger post-war debates.
Course Attribute(s): AU: Global Perspective, CoB: Humanities

ARTH 355 - Picasso in Context 4 hours. This course offers an in-depth study of Picasso in relation to other modern artists and movements. Special attention is paid to the nature of style. Students conduct research on the development of abstraction in the early twentieth century.

ARTH 382 - Gender and Art History: Feminist Art in a Global Frame 4 hours. This course examines 20th and 21st century art and media that engage with feminist and gender issues in a global context. The first few weeks are spent reviewing a concise history of first- and second-wave feminist thought, particularly its relation to art and visual culture. Thereafter, selected contemporary art from all regions of the globe are covered. (Cross-listed as SJST 382, WGST 382)
Course Attribute(s): AU: Global Perspective, CoB: Humanities

ARTH 392 - Art History Individual Projects 2-4 hours. Project or media based independent study with a faculty in the art history division. This course can only be used for elective credit. It is not intended to replace sophomore, junior or senior studio requirements. Permission of the instructor is required.

ARTH 400 - Topics in Art History 4 hours. Topics vary from semester to semester. May be repeated for credit. Prerequisite: One 300-level art history course.

ARTH 411 - Pre-Columbian Art 4 hours. A survey course that acquaints students with major monuments and styles of Pre-Columbian American art, including: architecture, sculpture, ceramics, dress, and body adornment Examined are several millennia of pre-contact art traditions in Meso America and South America from earliest art producing cultures to the Aztecs and Incas. The course looks at archaeological contexts and investigates possible meanings for art and written records dating from early periods that enhance our understanding of later cultures. Prerequisite: One 300-level art history course.

ARTH 420 - Islamic Art in the Mediterranean World 4 hours. This course traces the history of the art, architecture and culture of the Islamic world bordering the Mediterranean basin. Religious and secular works of art are examined in order to foster greater understanding and appreciation of Islamic visual culture and aesthetics.

ARTH 439 - History of Ceramic Art, Craft and Design: Global Flows 4 hours. In this course we examine the history of ceramic art, craft and design according to its major global flows. Recent scholarship, primary texts, and the direct study of objects from the Alfred Ceramic Art Museum collection form the basis for discussion of the history of ceramics? aesthetic values, praxis, patronage, and cultural identities.

ARTH 445 - Understanding Culture through the Lens of World Cinema 4 hours. Through the lenses of various themes--youth, sexuality, class, religion, politics, revolution, time, and space--this course explores how different cultures throughout the world understand and communicate their cultural values through cinema.
Course Attribute(s): AU: Global Perspective

ARTH 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

ARTH 460 - Exploring Art History: Concepts, Methods and Practices 4 hours. This writing-intensive seminar introduces students to research methods in art history and to a range of approaches of historical and current significance. Students identify art historical problems, formulate hypotheses, conduct research, read critically, build arguments, and present reports. Prerequisites: completion of one upper-division (300-400) Art History course and permission of instructor.

ARTH 461 - Viewing Sculpture: Figurative, Modernist, Minimalist, Performative 4 hours. A close examination of the nature of sculptural viewing over the past 200 years. Sculptural theory is considered alongside contemporary artistic practice, ranging from Antonio Canova's neoclassical figures to Janet Cardiff's audio walks. Primary sources will be used for class discussion, along with Potts' "The Sculptural Imagination". In addition to thinking critically about the phenomenon of viewing, we will investigate the changing attitudes toward sculpture and the broadening definitions of three-dimensional work in the modern period. Prerequisite: One 300-level art history course.

ARTH 466 - Histories of Photography in the Non-Western World 4 hours. This seminar focuses on how photography and its modern modes of vision were disseminated and adapted around the globe since its 1839 invention in Europe. The course is designed as a research lab: students develop both a short written report and related visual project. (Cross-listed as GLBS 466)
Course Attribute(s): AU: Global Perspective

ARTH 493 - Art in the Age of Digital Recursion 4 hours. A round-table seminar based on extensive group discussions and in-depth research on recent innovations in technology and how that technology has impacted art production and theory. Prerequisite: One 300-level art history course.

ARTH 499 - B.S. Thesis in Art History and Theory 2 hours. Capstone course open to graduating majors in Art History and Theory for the development of an article of publishable quality presented as a B.S. Thesis. Students write the thesis under the guidance of their primary advisor. Prerequisites: Completion of at least five upper-division Art History courses and permission of major advisor.

Courses Offered by the Performing Arts Division

Dance

DANC 120 - Fundamentals of Dance 2 hours. Introduces new and continuing dance students to the art of dance with an emphasis on alignment, strength, and flexibility of the whole body. Dancers are challenged to develop their physical intelligence and artistic expression in center and across the floor combinations using a wide range of dynamics and rhythms.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+), CLAS: (C) The Arts

DANC 200 - Special Topics in Dance 1-4 hours. Courses offered according to students' interests. Topics vary from year to year. (Sufficient demand)

DANC 211 - Dance History 4 hours. A study of the historical development of dance from mid-eighteenth century to the twenty-first century with an investigation of the dance works, artists, and the historical context in which the works were created. Course will include discussion, viewings of live performance and videos, lectures, and experiential activities.
Course Attribute(s): CoB: Humanities, SoAD: Humanities-'Other'

DANC 222 - Modern Dance I 2 hours. An introductory course in various modern dance techniques including some improvisational work. May be repeated one time for credit. Prerequisite: DANC 120 or permission of instructor.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+), CLAS: (C) The Arts

DANC 223 - Jazz Dance I 2 hours. An introductory course in jazz dance technique incorporating performing aspects of the jazz medium.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+), CLAS: (C) The Arts

DANC 224 - Contact Improvisation 2 hours. Students learn to use the physical properties of weight, momentum, countertension and speed to provoke spontaneous, fully-embodied dancing. This studio class introduces basic principles and patterns, such as exchanging weight with a partner, that lead to increasingly complex and daring movement. Working individually, with partners, and in groups, students learn to make alert and intelligent movement decisions as they improvise. Prerequisite: DANC 120 or permission of instructor.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+), CLAS: (C) The Arts

DANC 225 - Laban Movement Practicum 2 hours. This course provides a moving introduction to Laban/Bartenieff Movement Analysis.Students learn and develop proficiency in the L/BMA framework, focusing on the categories of Body, Effort, Shape and Space, as well as historical information and current uses. Prerequisite: DANC 120 or permission of instructor.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+), CLAS: (C) The Arts

DANC 230 - Improvisation/Composition I 3 hours. A laboratory for developing skills as a choreographer and improviser. Emphasis on generating movement vocabulary through improvisation and understanding of dance elements (time, space, energy) for composition. Dance studies are created and performed throughout the semester. Prerequisite: DANC 120.

DANC 270 - Alfred University Dance Theatre 2 hours. The AU Dance Theatre presents students with the opportunity to engage in learning and performing a variety of dance works choreographed by faculty, guest artists and fellow students. AU Dance Theatre presents one work-in-progress "showing" and one concert each year. Participation is open to all students. Prerequisites: DANC 230 and DANC 330, or permission of instructor.

DANC 322 - Modern Dance II 2 hours. An extension of the beginning course, continued instruction is given in dance forms, movement, awareness, technique and patterns. May be repeated 4 times for credit to a maximum of 10 credit hours. Prerequisite: DANC 222 or equivalent experience to be judged by the instructor. (PE) (PFIT)
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

DANC 323 - Jazz Dance II 2 hours. A continuation of the beginning course for students already able to move within the jazz idiom. It includes more advanced work in jazz technique as well as combinations. May be repeated 4 times for credit to a maximum of 10 credit hours. Prerequisite: DANC 223.
Course Attribute(s): AU: Phys Ed (pre Fall '19), AU: Phys Fitness (Fall '19+)

DANC 325 - Laban Movement Plenary 2 hours. This course supplements the Laban/Barteneiff Movement Practicum course offered congruently and allows advanced students to pursue rigorous theoretical investigations and application of the Laban/Bartenieff material.,The projects throughout the semester focus on application of L/BMA to student's area of interest.(Co-requisite: DANC 225)

DANC 330 - Improvisation/Composition II 3 hours. A laboratory for developing skills as a choreographer. Dance compositions are created and performed at the end of the semester. Emphasis on continuing development of the individual "voice" of the choreographer and the ability of the choreographer to "see" dance. 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 3 hours. In this studio course students explore place/space as inspiration for creating performance-based compositions. How can the specifics of a space inspire imagination to inspire movement composition and performance? Students also study the works of contemporary site-specific artists. Prerequisite: Completion of one art foundations course (ART 101 or IART 101), DANC 230, or permission of instructor.

DANC 340 - New and Existing Repertory 3 hours. In this course students learn existing dance repertory and are involved in creating new dance works. Through the rehearsal process, informal performances and research students explore a variety of rehearsal techniques, explore the varying roles of the dancer in the creative process, develop performing skills, and deepen their understanding of the choreography and the choreographers who created the work. Students are required to perform these works for the AU community throughout the semester. Prerequisite: Two dance courses or permission of instructor.

DANC 370 - Choreographic Practicum 1-3 hours. This course provides the advanced student with the opportunity to choreograph new dance works under faculty supervision. Prerequisites: DANC 230 and permission of instructor. Repeatable up to six credits.

DANC 385 - Dance Internship 4 hours. An off-campus, independent study project in which the student gains insight from experiencing actual tasks and responsibilities undertaken and performed by persons in the dance field. At completion, a

journal and final report is submitted to the faculty sponsor. Prerequisites: junior standing and permission of instructor.

DANC 450 - Independent Study 1-4 hours. Specialized pursuit of a subject within an area of dance not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

Music

MUSC 101 - 108 - Private Lessons 1 hour. One half-hour private lesson per week. Private lesson fee includes the use of practice rooms. Note: Some sections may require permission of instructor.

MUSC 110 - Music Appreciation 4 hours. An introductory course which introduces students to a wide variety of music, focusing on the evolution of Western European Classical music, but also touching upon American popular forms and some World Music. The course examines the historical and social background of classical music and emphasizes art of listening.
Course Attribute(s): CLAS: (C) The Arts, CoB: Humanities

MUSC 120 - Music Theory I 4 hours. A study of the basic rudiments of music--notation, pitch, rhythm, melody and harmony and how these elements combine to create music. The course includes music writing (elementary composition), ear training (recognition of melodic, rhythmic and harmonic patterns) and dictation (the ability to write these patterns in traditional music notation). A background in music, such as playing an instrument or vocal/choral experience, is recommended.
Course Attribute(s): CLAS: (C) The Arts, CoB: Humanities

MUSC 130 - Beginning Class Piano I 2 hours. Class lessons in piano technique for the beginner. Covers basics of tone conception, rhythm, articulation, and fingering, five-finger patterns and tonic chords in major keys. Simple composition projects are a requirement of the course. No previous musical training required.
Course Attribute(s): CLAS: (C) The Arts

MUSC 131 - Beginning Class Piano II 2 hours. A continuation of MUSC 130. Beginning work in pedaling and phrasing, easier major scales and one minor scale in three forms, primary chords in major and minor in block and arpeggio from, composition, transposition and harmonization. Prerequisite: MUSC 130 or permission of instructor.
Course Attribute(s): CLAS: (C) The Arts

MUSC 132 - Beginning Voice Class I 2 hours. Group lessons in technique and the art of singing. Class presents the practical application of vocal techniques, breath support, posture, diction and projection to increase the student's ease and confidence in using the singing voice as a means of expression. Outside reading and listening is required of students.
Course Attribute(s): CLAS: (C) The Arts

MUSC 133 - Music of the Guzheng 2 hours. This course is a step-by-step guide for beginners to learn the basic skill of playing the Guzheng (Chinese Zither), a traditional Chinese instrument. Students have a chance to join the AU Guzheng Ensemble if they wish.
Course Attribute(s): CLAS: (C) The Arts

MUSC 200 - Special Topics 1-4 hours. Includes courses in related areas of study. If applicable, small rental fee or breakage deposit required for applied music courses such as woodwinds class, Celtic music, etc. (Sufficient demand)
Course Attribute(s): CLAS: (C) The Arts

MUSC 211 - World Music 4 hours. World Music is an exploration of Non-Western European music. It is an introduction to the study of "ethnomusicology" and the role of music in society at large and a broad-ranging view of how this role is fulfilled in a variety of cultures. The course will focus on the indigenous cultures and music of Native America, Latin America, Africa, Eastern Europe, India, Indonesia and East Asia (Japan and Korea). Student projects will explore the popular music of one or more of these areas.
Course Attribute(s): AU: Global Perspective, CLAS: (C) The Arts, CoB: Humanities, SoAD: Humanities-'Other'

MUSC 212 - American Music 4 hours. This is a listening/survey course of the music of the United States from colonial times to the present. The course will examine the historical and social backgrounds of the incredible diversity of American Music, including Native American, Classical and Popular music through the ages, Folk, Jazz and the beginnings of Rock `n Roll. Students will also learn basic skills on a folk instrument (lap dulcimer, recorder, guitar) to give a hands on approach to learning American Folk Music.
Course Attribute(s): CLAS: (C) The Arts, CoB: Humanities

MUSC 213 - Introduction to Jazz 2 hours. This course examines the origins of jazz, how it was created and the directions it has taken. We discuss the history of jazz and consider social reactions to the music and artists by listening and by reading historical writing.
Course Attribute(s): CLAS: (C) The Arts, CoB: Humanities

MUSC 214 - Reel Music in America 4 hours. This course traces the history and development of film music through lecture, reading and film viewing. The class includes discussion and evaluation of different compositional styles and learning how to listen critically to film scores while viewing movies. We discuss how music and its relationship to film have changed over the last century. In this way, we uncover how music establishes psychological moods and guides our emotions. (Every Year)
Course Attribute(s): CLAS: (C) The Arts, CoB: Humanities

MUSC 215 - History of Rock Music 4 hours. In this course we study rock music from its origins to the present. We examine the place of rock music in society from its roots in African American blues and European American folk to its place in current society.
Course Attribute(s): CLAS: (C) The Arts, CoB: Humanities

MUSC 220 - Music Theory II 4 hours. This course develops students' understandings of harmonic compositional practices of 17th through 19th century music. Students continue the study of composition and analysis and become more proficient with harmonic analysis using figured bass, bass position symbols, and Roman numerals. Prerequisite: MUSC 120.
Course Attribute(s): CoB: Humanities

MUSC 271 - University Chorus 2 hours. University Chorus, a large singing ensemble is open to all students. The repertoire varies from traditional to global to popular and musical theatre.

A major work is performed every other semester with the AU orchestra. Previous works include Handel's "Messiah", Vivaldi's "Gloria", Mozart's "Requiem" and Orff's "Carmina Burana". Note: Ensembles may be repeated for credit to a maximum of 10 credit hours.
Course Attribute(s): CLAS: (C) The Arts

MUSC 272 - Chamber Singers 2 hours. The Alfred University Chamber Singers, a select vocal ensemble of 20-30 singers, performs a wide variety of repertoire in concerts on and off campus. Open to all students by audition. Note: Ensembles may be repeated for credit to a maximum of 10 credit hours.
Course Attribute(s): CLAS: (C) The Arts

MUSC 273 - Concert Band 2 hours. Band members study and perform music composed and arranged for the modern Concert Band, including orchestral transcriptions. Students work as an ensemble and perform at least one concert per semester. The ensemble plays a wide variety of styles including marches, symphonies, suites and more. Note: Ensembles may be repeated for credit to a maximum of 10 credit hours.
Course Attribute(s): CLAS: (C) The Arts

MUSC 274 - Jazz Ensemble 2 hours. The Jazz Ensemble provides an opportunity to explore the many styles of jazz in a big band context, including swing, be bop, Latin, and fusion. Students are also given the chance to develop their skills in improvisation. Open to all students by audition. Note: Ensembles may be repeated for credit to a maximum of 10 credit hours.
Course Attribute(s): CLAS: (C) The Arts

MUSC 275 - University Symphony Orchestra 2 hours. Open to all students, the symphony orchestra provides students an opportunity to study music ranging from the classical era to the 20th Century. The ensemble presents a concert each semester which often features student soloists. A major work is performed every other semester with the AU Chorus. Previous works include Handel's "Messiah", Vivaldi's "Gloria", Mozart's "Requiem" and Orff's "Carmina Burana". Note: Ensembles may be repeated for credit to a maximum of 10 credit hours.
Course Attribute(s): CLAS: (C) The Arts

MUSC 277 - Soprano/Alto Chorus 2 hours. The focus of this course is music written for soprano and alto voices, often composed by women. Areas of emphasis are vocal production, choral blend and basic music reading. The ensemble performs a fall concert. Note: Ensembles may be repeated for credit to a maximum of 10 credit hours.
Course Attribute(s): CLAS: (C) The Arts

MUSC 278 - Tenor/Bass Chorus 2 hours. This course offers the opportunity to explore literature for 3 and 4 part tenor/bass vocal ensembles. This course introduces the basics of singing technique. Basic music reading skills are also introduced. The chorus performs one concert on campus and one concert at a location off campus. Note: Ensembles may be repeated for credit to a maximum of 10 credit hours.
Course Attribute(s): CLAS: (C) The Arts

MUSC 279 - Chamber Music 1 hour. Chamber Music refers to small ensembles (string quartets, woodwind quintets, flute duets/trios/choirs; piano trios [piano plus two other instruments] or virtually any combination of instruments and/or voices). Students will be assigned to a group and will work on classical music for their particular ensemble. Students enrolled in this class should have at least a moderate facility on their instrument and be able to read music. Note: Ensembles may be repeated for credit to a maximum of 10 credit hours.

MUSC 301 - 308 - Private Lessons- Advanced 2 hours. Advanced study. One-hour lesson per week. Private lesson fee. Permission of instructor required.

MUSC 332 - Advanced Voice Class 2 hours. A continuation of MUSC 132. Continued work on vocal technique and expression with additional emphasis on singing in foreign languages (Italian and German diction). Students will learn and the use the IPA - the International Phonetic Alphabet. Prerequisite: MUSC 132 or permission of the instructor.

MUSC 450 - Independent Study 1-4 hours. Specialized pursuit of a subject within an area of music history or literature not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

MUSC 495 - Senior Recital 1 hour. Students enrolled in Private Lessons for at least six semesters are encouraged to present a half or full recital during their Senior year.

Performance Design & Technology

PDAT 120 - Technical Theatre 4 hours. A lecture/lab course in stage technology covering set construction, lighting, sound and scenic painting. Through a combination of lectures and hands-on practical experience, this course covers the art and design areas of set construction and provides a basic understanding of common stagecraft techniques. Lab hours required.
Course Attribute(s): CLAS: (C) The Arts

PDAT 200 - Special Topics in Performance Design and Technology 1-4 hours. Includes non-regularly scheduled course offerings in areas related to performance design and technology.

PDAT 220 - Design Fundamentals for Stage, Dance and Film 4 hours. A beginning design course introducing students to common principles of theatrical and performance design: scene, lighting, costume, sound, makeup, and props. Script analysis, research methods, the "isms"-- realism, symbolism, absurdism, postmodernism -- design unity, color, light/shadow, line/weight, and shapes, will be covered.
Course Attribute(s): CLAS: (C) The Arts, CoB: Humanities

PDAT 221 - Costume Construction 3 hours. A study of practical skills needed to transform a designer's rendering into 3-dimensional garments, including the nature and character of a range of fabrics, auxiliary materials, proper methods and the universal language of the textile world. Non-Theatre majors are welcome in this course. May be repeated for credit up to a total of 9.00 credit hours.

PDAT 222 - Stage Makeup 2 hours. A basic course introducing students to the principles of designing and applying stage makeup. Projects and makeup crew assignments required.
Course Attribute(s): CLAS: (C) The Arts

PDAT 223 - Sound Design for Performance 4 hours. This is an introductory course that covers audio equipment setup and use of microphones, mixers, effects, and speakers, digital cue

creation and playback, and designing the sound to support a production.
Course Attribute(s): CLAS: (C) The Arts

PDAT 224 - Entertainment Lighting: Electricity and Equipment 2 hours. This course gives students the necessary knowledge and skills to perform the duties of a theatrical electrician. The student becomes familiar with the tools and equipment of lighting, as well as the theory of electricity and lighting systems, through instruction and hands on experience.

PDAT 225 - Woodworking Techniques for the Stage 2 hours. This course gives the student the necessary knowledge and skills to perform the duties of a scenic carpenter. Students become familiar with the tools, equipment, and materials of carpentry, as well as the theory of construction and scenic techniques and styles, through instruction and hands on experience.

PDAT 270 - Play Production 1-4 hours. A lab course designed to give students practical production experience under faculty supervision in the areas of technical theatre and design. May be repeated for credit to maximum of 4 hours. Prerequisite: Permission of instructor.

PDAT 300 - Topics in Performance Des/Tech 1-4 hours. Includes non-regularly scheduled course offerings in areas related to performance design and technology.

PDAT 315 - Advanced Design Seminar: Design is Dramaturgy 2 hours. This course examines design for live performance by dismantling definitions of the designer's role. Beginning with source materials not intended for performance, students analyze narrative and structure to create performance environments. Emphasis is on the designer as adaptor/translator/storyteller. Prerequisites: PDAT 120 and PDAT 220.

PDAT 320 - Scene Design 3 hours. A scenic design course, which builds on the principles of design taught in PDAT 220. It further develops skills in research methodology, script analysis, sketching and painting techniques, model building, graphics, and use of computer-aided design. Representative scripts will be studied. Prerequisite: PDAT 220 or permission of instructor.

PDAT 321 - Lighting Design 3 hours. A study of basic electricity and theatrical lighting equipment with an emphasis on both the artistic as well as the technical aspects of stage lighting Crew assignments required. Prerequisite: PDAT 220 or permission of instructor.

PDAT 322 - Stage Costume Design 3 hours. A costume focused design course which builds on the principles of design taught in PDAT 220. It further develops skills in research methodology, script analysis, costume design theories, artistic processes, and costume construction for specific plays. Lab hours required. Prerequisite: PDAT 220 or permission of instructor.

PDAT 350 - Independent Study 2-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Junior standing and an approved Plan of Study required.

PDAT 370 - Advanced Play Production 1-4 hours. Advanced level continuation of PDAT 270. May be repeated for credit up to a maximum of 6 credit hours.

PDAT 385 - Internship in Performance Design and Technology 2-4 hours. An independent project allowing students to gain experience in professional or semi-professional performance design/technical theatre settings. A written Plan of Study describing the requirements of the course is required. Prerequisite: Junior standing; approval of Division Chair.

PDAT 470 - Advanced Projects in Theatrical Design and Technology 1-4 hours. This projects course is a faculty supervised experience for the advanced student in one of several areas of design: scenic; lighting; costume; sound; props; makeup; and technical direction. Prerequisite: PDAT 120 and 220; One of the following: PDAT 222, 320, 321, 322, 323; or permission of instructor.

PDAT 495 - Senior Project 2-4 hours. Students complete a project for the Performance Design and Technical Theatre minor in their areas of interest. The project is to be submitted as a proposal to the faculty and approved in advance, with advisory support and supervision provided by the appropriate faculty member. Prerequisites: senior standing; approved written proposal; permission of instructor.

Theatre

THEA 110 - Introduction to Theatre 4 hours. A study of theatre as a creative process and cultural phenomenon, including text and performance analysis, the examination of dramatic literature, and opportunities to experience and explore the work of the actor, the playwright, the director, the designer, and the producer. Scripts and productions which are the sources for discussions and assignments are drawn from a full range of cultures and time periods.
Course Attribute(s): CLAS: (C) The Arts, CoB: Humanities, SoAD: Humanities-'Other'

THEA 200 - Special Topics 1-4 hours. Includes non-regularly scheduled course offerings in related areas of study. Examples include Musical Theatre, Theatre and Social Change, Ritual and Theatre, Performance Theory, Ethnic Theatre.

THEA 205 - The Play's the Thing! - Playwriting 4 hours. This team-taught course combines beginning acting exercises with improvisations in writing. Texts include full-length plays and one-acts. Students are expected to write and revise one-act plays over the course of the semester. (Cross-listed as ENGL 205)
Course Attribute(s): CLAS: (C) The Arts, CoB: Humanities

THEA 211 - Women in Theatre, Society and Politics 3 hours. A survey course tracing the role(s) of women in theatre - audience, acting, directing, writing, designing, managing - from the ancient Greeks to contemporary times in a range of cultures. Representative plays, essays, and production artifacts are studied to discover the changing roles of women. (Cross-listed as WGST 211)
Course Attribute(s): CoB: Humanities, SoAD: Humanities-'Other'

THEA 212 - From Page to Stage: Script Analysis 4 hours. Play-scripts are the primary source materials for theatrical performances. Focusing on analysis of play texts as well as examining structure, genre, theme, style, character, language and imagery, this course encourages creative investigation and research for theatre practitioners and scholars.
Course Attribute(s): CLAS: (C) The Arts, CoB: Humanities

THEA 230 - Stage Management Fundamentals 2 hours. This course demonstrates the stage manager's role in theatrical productions and how essential it is for success. Topics include pre-production research, rehearsal protocol, production guidelines, stagecraft terminology, and developing a shared language with designers, directors, producers, cast, and crew.

THEA 240 - Acting I 4 hours. A beginning level course open to all students. Through progressive acting exercises, students are introduced to realism based theatrical performance, with emphases and exploration in vocal, physical and creativity development, text and character analysis. Plays from a full range of cultures are used for scene study assignments.
Course Attribute(s): CLAS: (C) The Arts

THEA 242 - Performance Lab 4 hours. This course provides students with specialized focus on various aspects of theatrical performance in a laboratory, experimental workshop setting. This flexible course is intended to respond to unique interests and needs of students not otherwise emphasized in other courses. Lab may focus on improvisational techniques, audition techniques, monologue development, masking, puppetry, or styles of acting.
Course Attribute(s): CLAS: (C) The Arts

THEA 270 - Play Production 1-4 hours. A lab course designed to give students practical production experience under faculty supervision in the areas of acting or directing. May be repeated for credit to maximum of 4 hours. Prerequisite: Permission of instructor.

THEA 300 - Special Topics 1-4 hours. Includes non-regularly scheduled course offerings in related areas of study. Examples include Musical Theatre, Theatre and Social Change, Ritual and Theatre, Performance Theory, Ethnic Theatre.

THEA 311 - Theatre: History, Art, Politics and Society I 4 hours. An examination of theatre's place in many world cultures, primarily focusing on the development of Western Drama, from earliest times through 1650. Emphasis on performance content and style, theatre architecture, and management practices as a reflection of a given culture's social, religious and political structures, and aesthetic impulses. Prerequisite: THEA 110 or permission of instructor.
Course Attribute(s): CoB: Humanities, SoAD: Humanities-'Other'

THEA 312 - Theatre: History, Art, Politics and Society II 4 hours. An examination of theatre's place in many world cultures, primarily focusing on the development of Western Drama, from 1650 to the present. Emphasis on the performance content and style of dramatic literature, theatre architecture, and management practices as a reflection of a given culture's social, religious and political structures, and aesthetic impulses. Prerequisite: THEA 110 or permission of instructor.
Course Attribute(s): CoB: Humanities, SoAD: Humanities-'Other'

THEA 340 - Acting II 3 hours. This intermediate level course emphasizes text analysis, scene study, in-depth character development, character relationship explorations, and exploration of the interface between text and subtext with a direct application to performance. Prerequisite: THEA 240 or permission of instructor.

THEA 342 - Advanced Performance Lab 4 hours. Advanced level continuation of THEA 242. May be repeated one time for credit (8 hours maximum).

THEA 350 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Junior standing and an approved Plan of Study required.

THEA 370 - Advanced Play Production 1-4 hours. Advanced level continuation of THEA 270. May be repeated for credit up to a maximum of 6 credit hours.

THEA 385 - Internship in Theatre 2-4 hours. An independent project allowing students to gain experience in professional or semi-professional theatre settings. A written Plan of Study describing the requirements of the course is required. Prerequisite: Junior standing; approval of Division Chair

THEA 400 - Special Topics 1-4 hours. Includes non-regularly scheduled course offerings in related areas of study..

THEA 430 - Directing I 3 hours. 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.

THEA 431 - Directing II 3 hours. The continued exploration of the processes and practices of production direction from conceptualizing, to auditions, to staging, resulting in the public presentation of a one-act play. Topics include special rehearsal problems, actor coaching, rehearsal pacing, and blocking. Prerequisite: THEA 430 or permission of instructor.

THEA 440 - Acting III 3 hours. Intended for the serious student of acting, this advanced performance course applies the in-depth skills developed in Acting II to historical texts: the Greek classics, Shakespeare, Restoration Comedy, Comedia del' Arteturn-of-the century modern realism. Prerequisites: THEA 240 and 340.

THEA 490 - Senior Seminar 1 hour. This course provides tools to bridge the gap between academic theatre and what comes next. Topics include exploration of options, the "business" of theatre, marketing oneself, resume building, taxes for independent "contractors", and preparation of materials (auditions, portfolios). Prerequisite: Theatre major; senior standing.

THEA 495 - Senior Project 2-4 hours. Students complete a project for the Theatre major in their areas of interest. The project is to be submitted as a proposal to the faculty and approved in advance, with advisory support and supervision provided by the appropriate faculty member. Prerequisites: senior standing; approved written proposal; permission of instructor.

Courses Offered by the Kazuo Inamori School of Engineering

Ceramic /Materials/Glass Engineering and Science

CEMS 200 - Special Topics 2-4 hours.

CEMS 203 - Introduction to Ceramic Powder Processing 3 hours. An introduction to ceramic powder processing that couples lectures with laboratory experiments. The course the practical aspects of ceramic processing: powder characterization, colloidal stability and suspension rheology, ceramic fabrication and microstructure evolution (sintering and densification). Prerequisite: CHEM 106.

CEMS 214 - Structure and Properties of Materials 3 hours. This course introduces the student to the relationships between the various levels of structure (electronic, atomic, crystal, microstructure and macrostructure) in a material and the influence of structure on properties and performance. The influence of structure on mechanical, electrical, optical, thermal and magnetic properties are discussed in the context of bonding, defects, crystal, micro and macrostructure. A significant aspect is the emphasis on the raw materials from which fuels, engineering polymers, ceramics and metals are derived. Prerequisites: CHEM 106, MATH 152.

CEMS 215 - Microscopy and Microstructural Characterization 3 hours. This course introduces optical, electron, and scanning probe microscopy techniques used to characterize the microstructure of materials. Lectures focus on the fundamental physical/chemical phenomena associated with the various techniques, their practical application, and the interpretation of the resultant data. Capabilities and limitations of these techniques are discussed. Laboratory exercises consist of the preparation and hands-on characterization of a variety of materials via both optical and electron microscope techniques. Prerequisites: CEMS 214 and PHYS 126; Pre- or Co-requisite: CEMS 216.

CEMS 216 - Bonding and Structure of Materials 3 hours. An introduction to the basic principles of solid materials structure. Electronic, atomic, and crystal structure are the primary focus for discussion. Structure is the foundation for understanding the physical and chemical properties of materials and for discussing defects in crystals. Key concepts are bonding within solids, rules that govern packing of atoms to form crystals, crystal structure, techniques for describing material's crystallography and selected properties of crystalline materials. Discussions culminate in an overview of common crystal structures in metals and ceramics. Prerequisites: CHEM 106 and CEMS 214.

CEMS 221 - Electrical Engineering Laboratories 2 hours. In this course we study circuit elements, voltage and current laws, mesh and node equations, voltage and current sources, energy and power. Other topics include: series and parallel circuits, equivalent circuits, sinusoidal sources and circuit responses, and principles of circuit analysis. Prerequisite: PHYS 126; MATH 271 as pre- or co-requisite; or permission of instructor.

CEMS 235 - Thermodynamics of Materials 4 hours. This course introduces the fundamental concepts of thermodynamics, equilibrium, and thermochemistry relevant to materials systems. Prerequisites: CHEM 106, MATH 253, CEMS 214.

CEMS 237 - Thermal Processes in Materials 4 hours. This course studies the basic principles of high-temperature reactions and processes. The course is divided into several subunits: ternary phase diagrams, surface and interface phenomena, atomic defects in materials, diffusion, and sintering theory. Students will get a solid foundation in each of these areas as well as seeing the interrelation and importance of those principles with respect to a control of the microstructure and properties of materials. Prerequisite: CEMS 235 or CHEM 343.

CEMS 251 - Mechanics of Materials 3 hours. This course is an introduction to the nature of forces acting on solid deformable bodies and the stresses and strains generated by those forces. It includes analysis of reactions of rigid bodies to simple loads from first principles and through finite element software. We apply these principles to mechanical testing of materials and engineering design. Prerequisites: ENGR 102 and PHYS 125.

CEMS 300 - Special Topics 1-4 hours. This course covers topics which are not ordinarily covered in detail in the general curriculum, but are either current areas of faculty research or areas of current or future industrial interest.

CEMS 303 - Powder Characterization 1 hour. This is a laboratory course investigating powder characterization tools for materials research. There is specific exposure to particle size, surface area, density, rules of mixtures, etc. One lecture and one lab per week. (Offered: Fall in A-Block)

CEMS 313 - Thermal Analysis 1 hour. This is a laboratory course investigating thermal analysis tools for materials research. There is specific exposure to TGA, DTA/DSC, Dilatometry, thermal conductivity, themocouple calibration, etc.(Offered: Fall in B-Block)

CEMS 314 - Ceramic Processing Principles 3 hours. Ceramic processing and fabrication is discussed in terms of scientific principles and engineering unit operations. Topics include the beneficiation and characterization of raw materials, colloidal behavior and rheology, additives, particle packing, mixing, forming processes, drying, and sintering. Prerequisite: CHEM 106.

CEMS 316 - Chemical Processing in Ceramics 3 hours. This course provides the knowledge and working understanding of the chemical facts and principles involved in the synthesis of raw materials and the chemical fabrication techniques used in current industrial practice. The discussion focuses attention on both oxide and non-oxide ceramics involved in high-performance structural and electronic applications. The design of chemical processes is emphasized in assignments. Prerequisite: CHEM 106.

CEMS 317 - Sintering 3 hours. This course covers solid-state, liquid-phase, viscous-phase, and reactive sintering in terms of mechanisms, grain growth, impurity segregation and grain boundaries, microstructural evolution, and microstructure related properties. Oxide and non-oxide materials and experimental methods are also discussed. Prerequisites: CEMS 237 and 314 or permission of instructor.

CEMS 318 - Refractories 3 hours. This course provides technical information concerning the raw materials, processing, microstructure, properties and applications of the principal types of refractories and high-temperature insulations. Technological and engineering factors pertinent to manufacture, process design

and control and design of refractory and insulation systems are presented. An understanding of current practice is used as a basis for recognizing refractory needs for design and applications, and areas for research and development of materials for future applications.

CEMS 322 - Introduction to Glass Science 3 hours. A survey of the nature of the vitreous state with detailed consideration of structural and kinetic theories of glass formation. Composition-structure-property relationships are emphasized to illustrate how glass compositions can be designed to fulfill a particular set of product requirements. Processes for "post-forming" treatments which further tailor properties are also presented. Prerequisite: CEMS 235.

CEMS 325 - Glass Laboratory 2 hours. This laboratory prepares students to fabricate and measure the properties of glass correlating composition and property relations, and observing trends. Optical property analysis is emphasized as are novel fabrication techniques such as sol-gel glass design for high-tech applications such as biomedical and photonics. Pre- or co-requisite CEMS 322.

CEMS 328 - Industrial Glass and Coatings on Glass 3 hours. The material covered in this lecture-based course include (1) glass markets, applications, and processing, (2) coatings on glass: processing, properties, and functionality, and (3) current topics in the glass industry. Prerequisite: CEMS 322.

CEMS 334 - Introduction to Polymers 3 hours. An introduction to the polymeric materials for engineering and industrial use that studies the fundamental classes, processing, properties, and uses of polymeric materials. In addition to the major polymers, specialty polymers for biological, electrical, and high-performance uses are discussed. Necessary organic nomenclature is covered. Prerequisite: CEMS 235 or CHEM 343.

CEMS 336 - Physical Metallurgy I 3 hours. Introduction to the physical and mechanical properties of metals with an emphasis on relating structure to properties. Strength, toughness, ductility, dislocations, phase diagrams, alloying, phase transformations, strengthening mechanisms, heat treatment, and solidification in metal systems. Processing and properties of plain carbon steels. Overview of forming and joining methods. Prerequisites: CEMS 214/235/251 or MECH 241/320.

CEMS 342 - Thermal and Mechanical Properties 4 hours. This course is an in introduction to the thermal and mechanical behavior of materials, including ceramics, glasses, metals, and polymers. Properties considered include strength, elastic modulus, hardness, toughness, thermal stresses, heat capacity and enthalpy, thermal conductivity, and thermal expansion. Heat transfer is also covered. Discussion includes the effects on thermal and mechanical properties structure (atomic scale and microstructure), processing, and temperature. Prerequisites: CEMS 214, 235 and 237.

CEMS 344 - Properties II: Electrical, Magnetic, and Optical 4 hours. Underlying the macroscopic electrical (electronic) properties of materials is the behavior of the atomic state. In this course, a summary of basic concepts covering the electrical, magnetic, and optical behavior of solids is presented. Emphasis is placed on the fundamental properties of electrons and ions in solids. The relationship of these fundamental properties to ceramics is discussed using microstructure, property relations. The use of materials (ceramics) in electrical, magnetic, and optical devices is discussed through solutions to numerical problems. Prerequisites: PHYS 126, MATH 271, CEMS 237.

CEMS 347 - Spectroscopy 2 hours. This course introduces spectroscopic techniques used to characterize the atomic structure of materials. Lectures focus on the fundamental physical/chemical phenomena associated with the various techniques, their practical application, and the interpretation of the resultant spectra. Capabilities and limitations of the various techniques are discussed. Laboratory exercises consist of hands-on characterization of the bulk and surface structure of various materials via the spectroscopic techniques discussed in lecture. Prerequisite: CEMS 216.

CEMS 349 - X-ray Characterization 2 hours. This course, which includes a laboratory, introduces x-ray techniques used to characterize materials. Prerequisite: CEMS 216 and junior standing.

CEMS 352 - Electroceramics 3 hours. A survey of ceramics that are used for their electrical, magnetic, optical and piezoelectric functions including discussion of their design, composition, critical properties, processing techniques and applications. Categories include insulators, ceramic superconductors, capacitors, resistors, gas sensors, thermistors, varistors, piezoelectric, magnetic and electro-optic ceramics. Prerequisite: PHYS 126, CEMS 214.

CEMS 368 - Introduction to Bioengineering 3 hours. Bioengineering combines advances in engineering, biology and medicine to improve human health. It is, by necessity, cross-disciplinary. This course surveys and integrates selected aspects of engineering, biomedical, and clinical sciences to provide students with a global perspective of the field. Offered Fall semesters only. Prerequisites: CEMS 214 and BIOL 211 or permission of the instructor.

CEMS 397 - Glassartengine 2 hours. This is an interdisciplinary course between glass engineering students and glass art students. The course is taught by various faculty across both areas combining both technologies and philosophies to foster collaborations yielding unknown results. (Studio elective for art students; Technical Elective for engineering students.) May be repeated for credit up to a total of 8 credit hours. (Cross-listed as ART 397)

CEMS 400 - Special Topics 1-4 hours. This course covers topics which are not ordinarily covered in detail in the general curriculum, but are either current areas of faculty research or areas of current or future industrial interest.

CEMS 411 - Science of Whitewares 3 hours. The science and technology of whitewares (i.e., primarily stonewares and porcelains) covering mineralogy, raw material characterization, mixing, rheology and plasticity, forming processes, drying, firing, phase equilibria, thermal stress evolution, microstructural characterization, physical properties, and glazing. This course provides students with a fundamental basis for analyzing problems encountered in whitewares production so that general knowledge can be used to solve specific problems. Prerequisites: CEMS 203, 314.

CEMS 415 - Porcelain Enamels 3 hours. Porcelain enamels are chemically durable ceramic coatings on metals designed to resist corrosion, extend vessel lifetimes, and provide a sanitary, smooth, and non-reactive surface. This course introduces the formulation, characterization, and problems associated with the use of porcelain enamels. Prerequisite: CEMS 322.

CEMS 420 - Optics and Photonics 3 hours. The focus of this course is the foundations of linear optics leading to detailed exploration of electronic and vibrational processes in different materials and photonics. Advanced topics include femtosecond laser pulses and THz spectroscopy. Format consists of lectures and hands-on laboratory for research/measurements. Prerequisites: CEMS 344, PHYS 325.

CEMS 423 - Mass Transport in Glasses and Melts 3 hours. A thorough discussion of the fundamentals of diffusion processes, which will be followed by discussion of ionic diffusion and ion exchange, gas diffusion, viscosity, ionic conductivity and dielectric relaxation, mechanical relaxation, chemical durability, and weathering in glasses, glass-ceramics, and melts. The effects of both atomistic structure and morphology will be discussed for each of these topics. Prerequisites: CEMS 235, 237 and 322.

CEMS 426 - Advanced Glass Science 3 hours. This course covers advanced topics in glass and related fields which are not ordinarily covered in the general curriculum, but are either current areas of faculty research interest or areas of current or anticipated industrial or academic interest. Examples of possible topics include, but are not limited to, rare elements in glasses, non-silicate oxide glasses, halides in glasses, chalcogenide glasses, sol-gel processing, specialized experimental methods, such as neutron and or x-ray diffraction spectra, characterization of glasses, biological applications of glass, glass-ceramics, computer modeling of glass structure, natural glasses, and other topics which correspond to interests of the students and faculty. This course may occasionally be taught by visiting faculty in areas of their specialization. Readings from the literature will normally be a significant component of this course. Prerequisite: CEMS 322.

CEMS 438 - Nanotechnology 3 hours. The science and engineering of creating materials, functional structures and devices on the nanometer scale. Carbon nanotubes, nanocrystals, quantum dots, nanoscale films and composites, properties of materials as a function of size, self-assembly. Molecular engineering, bionanotechnology, devices and applications. Prerequisite: CEMS 214.

CEMS 446 - Mechanics of Composites 3 hours. An introduction to the mechanical properties of composites. Topics include matrices and reinforcements, fabrication techniques, review of elasticity, micromechanics, classical lamination theory, and design criteria. Prerequisites: CEMS 214 and (CEMS 251 or MECH 241).

CEMS 465 - Biocompatibility 4 hours. This course focuses on the application of materials to restoring human anatomy which has been compromised due to disease or trauma. This lecture series looks at how synthetic and natural materials restore body function and how they interact with host tissues, including materials science, surface interactions, and medical procedures. Prerequisite: CEMS 368.

CEMS 466 - Skeletal Tissue 3 hours. The skeleton contains 206 bones that provide strength and rigidity yet allow flexibility. However, bone can fail as a result of both disease and insult. In this course we study the hierarchical structure of bone, how disease affects it and, subsequently, its repair both medically and surgically. Offered every year. Prerequisite: CEMS 368.

CEMS 468 - Biomedical Materials 3 hours. A survey of ceramic, metal and polymer materials and devices for repair and replacement parts in the human body. Emphasis is on the nature of the materials, the design and fabrication of devices, properties, applications and the problems of introducing foreign materials into the biosystem. Prerequisites: CEMS 214 and 251.

CEMS 480 - Thesis 2 hours. An independent research project carried out under the supervision of a faculty member. Taken twice for a total of 4.00 semester credit hours of thesis. Senior standing required.

CEMS 484 - Engineering Operations 4 hours. This course helps students understand the engineering and business aspects of a glass and ceramic manufacturing facility with an overview of large scale manufacturing processes of glass/ceramic products. 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 a term report covering set-up of business plans for a hypothetical glass or ceramic product. A visit to at least one glass or ceramic manufacturing plant is required. Senior standing required.

Engineering

ENGR 101 - Introduction to Engineering 2 hours. An introduction to engineering with consideration of real engineering problems, such as those identified as Engineering Grand Challenges by the National Academy of Engineering. This course is taught in a project-based learning environment.

ENGR 102 - Computer Aided Design 2 hours. An introduction to 3D conceptualization, computer aided solid modeling and design, engineering drawings, and simulation using SolidWorks. The class is conducted in a "learning-laboratory" style in which students exercise a self-paced individual learning experience through the completion of class projects and weekly quizzes.

ENGR 104 - Computer Aided Engineering 2 hours. An introduction to mathematical calculations and computer programming techniques for science and engineering. Assignments include tutorial exercises and group project assignments focusing on engineering design and analysis of systems, devices, and materials. MatLab is the primary tool used.

ENGR 110 - Technical Communications 4 hours. Technical communication is the delivery of information in an organized manner. This course will examine tools, resources, and design methods used to create technical documents. The course is designed for students who have solid grammar, spelling, and punctuation skills. Prerequisite: ENGL 101 or equivalent.

ENGR 111 - Explorations in Biomaterials 1 hour. 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.

ENGR 112 - Explorations in Ceramic Engineering 1 hour. 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.

ENGR 113 - Explorations in Renewable Energy Engineering 1 hour. 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.

ENGR 114 - Explorations in Glass Engineering 1 hour. 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.

ENGR 115 - Explorations in Materials Science and Engineering 1 hour. 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.

ENGR 116 - Explorations in Mechanical Engineering 1 hour. An "Engineering Exploration" course focusing on mechanical engineering. This hands-on laboratory course covers data collection, analysis and reporting. First-year engineering students enroll in two different "Engineering Exploration" courses.

ENGR 160 - First-Year Seminar 0 hours. A series of lectures each semester for first year engineering students on topics of importance to engineers. Attendance mandatory.

ENGR 200 - Special Topics 2-4 hours.

ENGR 206 - Engineering Economy 3 hours. The analysis and evaluation of alternative uses of capital in engineering and business projects. Financial decision-making for engineering and management alternatives involving investment, operating cost and time value of money. Prerequisite: MATH 152.

ENGR 210 - Discovery and Disaster 2 hours. Throughout history, technological discoveries have enabled humanity to do new things in new ways. In some cases, these "discoveries" have been driven by "disaster" or led to "disaster". In this course, we examine a number of such discoveries. We place the events in cultural, technical, historical, environmental, and ethical context. Counts toward the Humanities/Social Sciences requirement. Prerequisite: Sophomore standing.
Course Attribute(s): SoE: Other Humanities/Soc Sci

ENGR 220 - Circuit Theory I 4 hours. Voltage and current laws, voltage and current sources, resistor, capacitor, and inductor. Series and parallel circuits, equivalent circuits, mesh and node equations, sinusoidal response, electric power and energy. Prerequisite: PHYS 126; pre- or co-requisite: MATH 271.

ENGR 300 - Special Topics in Engineering 1-4 hours.

ENGR 301 - Engineering Leadership: Principles and Practice for E-LEAD 1 hour. As a required course for students in the E-LEAD (Engineering Leadership Education and Development) program, this course explores the nature, theory, and practice of leadership. Permission of the instructor is required for registration.

ENGR 305 - Engineering Statistics 3 hours. Statistics as a tool in scientific and engineering applications. Topics include design of experiments, hypothesis testing, analysis of variance, regression analysis, statistical quality control, Bayesian decision-making and industrial applications and design. Prerequisite: MATH 152.

ENGR 306 - Engineering Economics 2 hours. This course enables students to understand economic aspects of an engineering project. They learn some engineering economic tools including analysis of financial statement, understanding of the concept of the "time value of money," proficiency in calculating equivalent cash flows, and capability of evaluating investment projects. Prerequisite: MATH 152.

ENGR 320 - Data Acquisition 2 hours. This course explores data acquisition principles. Topics include basic measurements, data interface and acquisition, analog and digital signals, programming and interfaces for instrument and system control, data formatting, and data analysis and visualization techniques. Prerequisites: PHYS 126, MATH 271.

ENGR 360 - Undergraduate Seminar 0 hours. A series of lectures each semester for sophomore, junior, and senior engineering students on topics of importance to engineers. Attendance mandatory.

ENGR 370 - Engineering Leadership Project 1 hour. This is an optional course for students in the E-LEAD (Engineering Leadership Education and Development) program. Students gain practical experience to apply leadership skills in the design and deployment of a project. Prerequisite: Permission of instructor. (Can be taken twice for credit)

ENGR 395 - Engineering Design 2 hours. This course introduces the junior-level student to engineering design as a part of the capstone experience. Students learn basic design principles and study some selected examples. Small teams of students complete a design project. Prerequisite: Junior standing or permission of the instructor.

ENGR 400 - Special Topics in Engineering 2-4 hours. Special topics in engineering are offered. Topics vary from year to year.

ENGR 450 - Independent Study 1-3 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Junior or senior standing and approved Plan of Study required.

ENGR 471 - Genetic Algorithms 3 hours. Genetic Algorithms, GA, is a collection of search and optimization techniques that function according to the evolutionary processes. Simple GA, classifier systems, GA with variable population size, and GA in machine learning context are introduced. Also, selected

applications in optimization techniques and prediction methods are discussed. This is a project-oriented course. Students should have knowledge of C++, MATLAB, or a similar programming language.

ENGR 480 - Senior Capstone Individual Project 2 hours. THis capstone project is conducted by an indovidual student, typically over two consecutive semesters. Successful projects involve project planning and management; decision-making under realitic constraints; problem solving; data collection, analysis, and evaluation; and communication of results in a poster presentation and writen report. Repeatable for credit up to 4 credit hours. Prerequisite: senior standing.

ENGR 484 - Optimization Methods in Engineering 3 hours. In this course we study optimization as an engineering design tool. Topics covered include nonlinear programming, computational techniques for unconstrained and constrained problems, conjugate gradient, feasible directions methods, and design applications. Prerequisites: ENGR 104 and MATH 271.

ENGR 490 - Senior Capstone Group Project 2 hours. THis capstone project is conducted by a group of students, typically over two consecutive semesters. Successful projects involve project planning and management; decision-making under realitic constraints; problem solving; data collection, analysis, and evaluation; and communication of results in a poster presentation and writen report. Repeatable for credit up to 4 credit hours. Prerequisite: senior standing.

Mechanical Engineering

MECH 211 - Statics 3 hours. Two and three-dimensional force systems, the concept of equilibrium, analysis of trusses and frames, centroids, bending moment and shear diagrams, friction. Prerequisites: PHYS 125, MATH 152.

MECH 212 - Dynamics 3 hours. Rectilinear and curvilinear motion, translation and rotation, momentum and impulse principles, and work-energy relationships. Prerequisites: PHYS 125, MATH 253.

MECH 241 - Mechanics of Materials 3 hours. The mechanics of solid deformable bodies, members subjected to tension, compression, flexure and torsion. Beam topics, stability of columns, combined stresses and strains. Prerequisite: MECH 211.

MECH 320 - Thermodynamics I 3 hours. Thermodynamic properties of gases, vapors and liquids. Laws of thermodynamics, energy and availability analysis. Prerequisites: MATH 253, PHYS 125.

MECH 321 - Thermodynamics II 3 hours. Applications of thermodynamic principles to the analysis of energy systems including power and refrigeration cycles. Mixtures and solutions, chemical reactions and equilibrium. Prerequisite: MECH 320.

MECH 324 - Fluid Mechanics I 3 hours. Principles of mechanics and thermodynamics applied to fluids at rest or in motion. Compressible and incompressible flow, viscous and non-viscous flows, boundary layers, pipe flow, dimensional analysis. Prerequisites: MECH 212, MATH 253.

MECH 326 - Heat Transfer 3 hours. Principles of steady-state and transient conduction, radiation and convection. Applications to heat exchangers and environmental problems. Prerequisites: MECH 320, 324

MECH 327 - Thermal Sciences Laboratory 2 hours. Experiments are conducted to illustrate aspects of fluid mechanics, thermodynamics, and heat transfer. Concurrent Registration: MECH 321 and 326. Prerequisites: MECH 320, 324 or CEMS 235, 332.

MECH 343 - Mechanics of Materials Laboratory 2 hours. Experiments designed to illustrate the principles of mechanics of materials and the methods of experimental mechanics. Prerequisites: MECH 211, MECH 241, MATH 271.

MECH 354 - Mechatronics 3 hours. Mechatronics is an integration of mechanical, electrical, electronic, and control engineering. Topics include sensors, signal processing, mechanical and electrical actuation systems, system models, frequency response, closed-loop controllers, and PLC's. Prerequisite: ENGR 220.

MECH 362 - Kinematics and Dynamics of Machinery 3 hours. Analysis and synthesis of mechanisms. Applications to reciprocating engines, cams, gears, flywheels, balancing, critical speeds, torsional vibration. Prerequisite: MECH 212.

MECH 364 - Machine Design I 3 hours. Analysis, synthesis and design of machine elements and systems. Development of engineering judgment, stress and failure analysis, design for finite and infinite life. Corrosion, wear, lubrication, springs, and bolts. Prerequisites: (MECH 241 or CEMS 251), MECH 362

MECH 366 - Manufacturing 3 hours. Analysis of manufacturing processes. Topics include casting, forging, extrusion, drawing, sheet-metal working, machining, powder metallurgy, fabrication of non-metals, joining, and many others. Plant tours are a required part of the course. Prerequisite: MECH 244 or CEMS 214. Pre- or Co-requisites: MECH 364 and ENGR 305.

MECH 400 - Topics in Mechanical Engineering 2-4 hours. Special topics in mechanical engineering which vary from year to year. Prerequisite: Permission of instructor. (On demand)

MECH 415 - Mechanical Vibrations I 3 hours. Harmonic oscillator; response of damped linear systems; multi-degree of freedom systems; introduction to vibrations of continuous systems. Prerequisite: MATH 271.

MECH 417 - Introduction to Finite Element Analysis 3 hours. Use of the finite element method to solve problems in the areas of stress analysis, heat conduction. and fluid flow. Weighted residual and variational approaches, shape functions, numerical integration, and the patch test. Prerequisites: (CEMS 251 or MECH 241), MATH 271.

MECH 422 - Control Systems 3 hours. Linear feedback control system modeling analysis, and compensation techniques. Prerequisite: RNEW 322.

MECH 424 - Fluid Mechanics II 3 hours. Advanced topics in fluid mechanics: compressible flows, boundary layers, potential flow, turbomachinery. Prerequisites: MECH 320, 324, MATH 271.

MECH 434 - Heating, Ventilation, and Air Conditioning 3 hours. Applied engineering thermodynamics; psychometrics; humidification and dehumidification processes; air cooling processes, heating processes; heat vapor transmission, fluid flow and pressure losses; air conveying and distribution. Prerequisite: MECH 321, (MECH 326 or CEMS 332).

MECH 435 - Industrial Control via Microcontroller 3 hours. This course covers industrial control process and principles, fundamentals of microcontroller systems, hardware, software, embedded processors, logic, circuits, debugging, development tools, architecture, designs, and controls.

MECH 438 - Alternative Vehicle Energy Control and Powertrain Design 3 hours. In this course we explore the design fundamentals of alternative energy vehicles including electric and hybrid vehicles. Topics covered include power electronics, power systems, drivetrain, component modeling, battery systems, supervisory control and fault diagnosis. We rely heavily on model-based design including Simulink, with an emphasis on electric and hybrid vehicles. Prerequisites: ENGR 104 and ENGR 220.

MECH 448 - Mechanics of Composite Materials 3 hours. An introduction to composite materials with an emphasis on their selection, analysis, and use in modern engineering applications. Advantages and limitations of composite materials, basic concepts and characteristics. Stiffness and strength theories for uniaxial and multidirectional composite materials, with a macromechanical emphasis. Prerequisites: MECH 241, MECH 244 or CEMS 214, MATH 271.

MECH 486 - Modeling and Simulation of Dynamic Systems 3 hours. Mathematical modeling of physical systems and simulation of linear system responses. System response to varied inputs are studied using classical techniques. Laplace transforms and modeling and simulation software. Prerequisites: (MECH 326 or CEMS 332) and (ELEC 220 or CEMS 221).

MECH 495 - Senior Design Project I 3 hours. Individual and group comprehensive design projects employing basic and professional approaches to planning, organizing, judgmental and economic factors. Integrative aspects of creative design and analysis, interdisciplinary systems. Emphasis on technical communication skills. Prerequisite: Senior standing and permission of instructor.

MECH 496 - Senior Design Project II 3 hours. Continuation of MECH 495 and culmination in a comprehensive design report and developmental prototype, as required. Prerequisite: MECH 495.

Renewable Energy Engineering

RNEW 200 - Special Topics 1-3 hours.

RNEW 201 - Renewable Energy 3 hours. The main objective of this course is to gain an elementary familiarity with renewable forms of energy. The course addresses three distinct areas: power and energy, generating power from renewable sources of energy, and the economics and markets of energy. Prerequisite: MATH 152.

RNEW 255 - Power System Operation and Economics 3 hours. This course covers power system operation, generation scheduling, and trading. The idea is to minimize the total operation cost of a power system subject to power balance and other constraints. Different minimization methods are covered and the coordination between thermal and renewable generation are discussed. Prerequisites: MATH 151 and MATH 152.

RNEW 303 - Software Engineering 4 hours. Software engineering concepts and techniques, structured design and modular construction, fundamentals of programming style; high level language programming, error detection and error location techniques.

RNEW 310 - Fuel Cell Principles and Technology 3 hours. This course is designed for advanced undergraduate students to gain the basic science and engineering concepts behind fuel cell technology. It emphasizes the functional scientific principles and practical application. Prerequisite: junior standing.

RNEW 320 - Circuit Theory II 4 hours. First order and second order circuits, natural and forced response, step response, passive and active filters, transformers, dependent sources (modeling, biasing, and gain calculation), Fourier series, Fourier series analysis. Prerequisite: ENGR 220.

RNEW 322 - Signals and Systems 3 hours. Signal and system modeling concepts, system analysis in time domain, Fourier series and transform, Laplace transform, state variable techniques, z-transform, analysis and design of digital filters, FFT and applications. Prerequisite: ENGR 220.

RNEW 400 - Special Topics 1-3 hours. Special topics in renewable energy engineering which vary from year to year.

RNEW 431 - Wind Energy 3 hours. The primary objective of this course is to gain an elementary familiarity with wind energy. After a brief review of power and energy, wind energy is introduced. Topics of discussion include history and evolution of wind energy technology, power in the wind, wind turbines, components and operation of typical wind systems, small scale hybrid energy systems, markets, demand, and resources. The course also includes a class project. Prerequisites: MATH 152 and PHYS 126.

RNEW 432 - Solar Energy Systems 3 hours. In this course we study solar radiation, theory of light, topics of heat transfer associated with solar energy, radiation characteristics of materials, collectors, energy storage, solar loads and the economics. The physics of voltaic systems will also be discussed. This course includes a design project. Prerequisite: MECH 320.

RNEW 441 - Energy, Renewables and the Environment 3 hours. The main objective of this course is to gain an elementary familiarity with energy, covering the concept, forms, resources, and its impact on the environment, all with an emphasis on the renewables. We discuss physics of energy, its different forms--mined and otherwise, the Sun, the Earth and the environment. The course includes a number of field trips. Prerequisites: PHYS 125 and senior standing.

RNEW 461 - Power Electronics for Renewable Systems 3 hours. This course is an introduction to power electronics with emphasis on applications such as energy conservation and renewable energy. Topics include introductory switching devices, devices for power electronics, and converter design and simulation. Basic concepts of DC-DC converters in continuous

and discontinuous modes are included, along with design for motor drives and transformer-isolated switch-mode power supplies. Prerequisite: ENGR 220.

RNEW 468 - Electric Machinery 3 hours. Magnetic theory and circuits, balanced polyphase circuits, and fundamentals of electromechanical energy conversion. Phasors, per-unit notation, transformers, three-phase and single-phase induction motors, synchronous, direct current and specialized machines. Prerequisite: ENGR 220.

RNEW 490 - Engineering Design Methods 2 hours. The purpose of design is to convert resources into devices, systems. processes and products to meet human needs. Detailed analysis and application of the design problem solving process are practiced. Prerequisite: Senior standing.

RNEW 496 - Senior Design Project 4 hours. The student develops an original individual design project with a faculty advisor from conception to design, construction and testing. A complete report is required.

Courses Offered by the College of Business

Accounting

ACCT 211 - Financial Accounting 3 hours. This fundamental course introduces the student to the language of business. The basic theory and practice of financial accounting is studied including the balance sheet equation, the system of debits and credits, transaction analysis, adjusting entries, financial statement preparation, closing entries, income determination and the accounting for assets and liabilities. Prerequisite: Sophomore or higher class standing.

ACCT 212 - Managerial Accounting 3 hours. The second course of study of the fundamental principles of accounting has an emphasis on managerial accounting. The application of the accounting model on investments, long term liabilities and corporate stockholders' equity is studied. The course also introduces the student to the basics of managerial accounting information and the cost of goods manufactured, explains approaches to costing products and services and explains managerial accounting's use in decision making, planning and controlling the business. Prerequisite: ACCT 211.

ACCT 300 - Special Topics in Accounting 1-4 hours. Topics not covered in other accounting courses are presented.

ACCT 310 - Forensic Accounting Introduction 3 hours. This course is designed to give a basic overview of the world of forensic accounting and its application in today's society. We start with the foundational areas and then learn about types of fraud examination and forensic accounting. We delve into more specific fraud areas covering internal organization issues dealing with employees and vendors. We also take time to discuss the areas of bankruptcies and identity thefts. Topics of discussion include prevention, detection, and investigation of fraud while applying our new skills to real world situations. Prerequisite: ACCT 211.

ACCT 361 - Intermediate Accounting I 3 hours. This course expands and broadens the accounting concepts and principles developed in previous accounting courses. The course considers the conceptual framework underlying the financial statements and focuses on the recognition and measurement of income, assets, and liabilities. Prerequisite: ACCT 211, junior standing.

ACCT 362 - Intermediate Accounting II 3 hours. The continuation of the accounting principles and concepts discussed in Intermediate I. Major emphasis is on debt financing, equity financing, investments in debt securities and equity securities, leasing, employee compensation and pensions, and earnings per share. Prerequisite: ACCT 361, junior standing.

ACCT 371 - Personal Income Tax 3 hours. The importance of income taxation relating to individual decisions and the need for tax research and planning is emphasized. This course covers preparation of individual returns with detailed analysis of the underlying tax concepts. Prerequisites: ACCT 211, junior standing.(Offered Fall, every year)

ACCT 372 - Cost Accounting 3 hours. Analysis of cost behavior, cost-profit volume analysis, budgeting, job order and process cost systems, standard costs and cost control. Quantitative methods and behavioral developments are applied to cost accounting data. The objective is improvement of the quality of the cost information provided for managerial decision making. Prerequisites: ACCT 212, ECON 201, junior standing.

ACCT 400 - Special Topics 3 hours. This course details major issues in the field of accountancy with primary topics changing from semester to semester. Prerequisite: 6 hours of accounting coursework. May be taken more than once for credit.

ACCT 441 - Auditing Theory and Practice 3 hours. Current auditing practices and objectives of independent accounting firms examined in detail. Particular emphasis placed on auditing theory and procedures and the ethical and legal responsibilities of auditing. Prerequisite: ACCT 362 either previously or concurrently.
Course Attribute(s): AU: Service Learning Courses, CoB: Field Experience

ACCT 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

ACCT 460 - Seminar in Accountancy 3 hours. The seminar in accounting examines major contemporary issues in the field. Issues covered may include topics such as taxes, financial accounting theory, C.M.A and C.P.A problems, or international accounting problems. Students are responsible for presenting, discussing, and writing about ideas expressed in the professional literature. Prerequisite: 6 hours of accounting coursework.

ACCT 462 - Advanced Accounting 3 hours. An advanced course in the theory of financial accounting with heavy emphasis on special problem areas in accounting such as partnership accounting, home office and branch accounting, mergers and acquisitions, consolidated statements, bankruptcy, estates and trusts, fund accounting and international accounting problems. The current pronouncement of the major authoritative bodies reviewed and illustrated. Prerequisite: ACCT 362.

ACCT 471 - Corporate Taxation 3 hours. A continuation of Personal Income Tax. Emphasis is on corporate taxation. Corporations to be examined include C Corps, S Corps, and the Limited Liability Corporations. Taxation of partnerships, estates, and trusts will also be covered. Prerequisite: ACCT 371.

Business

BUSI 100 - Topics in Business 1-3 hours.

BUSI 105 - Business Perspectives 1 hour. This course is a survey of business concepts, principles, techniques and theories. The goal of the course is to expose students to the need for a high level of awareness of the business function interactions a decision maker faces in a competitive information-driven world. Topics covered include, but are not limited to, the following: global business environment, marketing, production operations, information technology, and innovation management.

BUSI 106 - Contemporary Business 3 hours. Students gain experience in the creation and operation of a business either through simulation or an actual business. Through this experience, students have primary exposure to all of the business functions: accounting, finance, marketing, information systems and management. Open to first-year students in the School of Business or by permission of instructor.

BUSI 113 - Business Statistics 3 hours. The elements of basic statistical theory and technique are introduced with an emphasis on applications to business situations. Computer-based software packages complement these objectives.
Course Attribute(s): CLAS: (03) Quant Reasoning, CoB: Quant Reasoning

BUSI 213 - Research Methods for Business 3 hours. This course introduces students to research methods in business. Students learn how to develop a research idea, obtain data, statistically analyze the data, and explain the results. Real world business research is also covered. Prerequisite: BUSI 113.
Course Attribute(s): CoB: Quant Reasoning

BUSI 261 - Operations Research 3 hours. Scientific approach to the analysis and solution of economic and business problems to provide a quantitative basis for model building and decision making. Mathematics is applied to business decision making through techniques such as linear programming, queuing theory, network models, Markov analysis, etc. Prerequisites: MATH 107 and BUSI 113; ECON 201 either previously or concurrently.

BUSI 300 - Topics in Business 1-4 hours. Topics not covered in other Business courses are presented.

BUSI 301 - Family Business Management 3 hours. This course explores the unique issues that a family business encounters from its initial founding through its generational development and to its ultimate success or demise. Family businesses that prosper generation to generation pursue unconventional strategies. Because they are values-driven and think very long-term, it is theorized that successful family businesses take approaches not commonly found in the current management practices at most companies. Issues addressed include: family firm performance, family business culture, challenge of succession, conflict and harmony, business vs. family communication, family constitution, and corporate vs. family business governance.

BUSI 302 - Entrepreneurship in Practice 2 hours. This course is designed around the actual operations of an established student-run business. Students will: market, stock, staff and operate a small business; provide the management of the business; and generate and report on financial results.
Course Attribute(s): CoB: Field Experience

BUSI 305 - German Auto Industry 4 hours. This faculty-led travel course explores the basic concepts of international business strategy, German culture and some history. We focus on the German auto industry, lean manufacturing, and global competition. Students form teams with German counterparts to compete in an international business simulation. Travel to Germany for 7-10 days is a required part of this course. Prerequisite: Sophomore standing or permission of instructor.
Course Attribute(s): AU: Global Perspective, AU: Travel Courses

BUSI 439 - Entrepreneurship in the 21st Century 3 hours. The primary objectives of this course are twofold: 1) provide students with an introduction to the theoretical and practical aspects of entrepreneurship and small business development, and 2) identify, probe and gain insights into the role family based business plays in socio-economic development and private enterprise.

BUSI 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

BUSI 457 - International Business 3 hours. The volume, composition, and pattern of worldwide trade; the significance of international trade to the American economy. An introductory description of the international payments mechanism, an elementary analysis of the balance of payments, and a survey of U.S. continental policies, the role, impact and structure of the multinational enterprise and the government policies towards it, firms, marketing, accounting and management responses to the international environments. Prerequisite: Junior standing.
Course Attribute(s): AU: Global Perspective

BUSI 460 - Seminar in Business 3 hours. The seminar in business examines major contemporary issues in the field of business administration. Students are responsible for presenting, discussing, and writing about ideas, theories, frameworks, and applications within the field of business.

BUSI 485 - Internship 1-4 hours. Faculty-supervised experience in which the student applies theoretical knowledge in practical situations. Each student submits a paper outlining the experience and is responsible for procuring an on-site supervisor's evaluation of his/her work. A minimum of 80 hours of practical experience is required for each credit. A maximum of four (4) internship credits can be included in the 120 academic credits required for graduation.
Course Attribute(s): CoB: Field Experience

BUSI 499 - Business Policy 3 hours. This capstone course assumes an integrative business approach to the application of strategic management. The purpose of course is to assure students of understanding and utilizing the principles and practices in attaining and sustaining competitive advantage in the market place. Prerequisites: MGMT 328, FIN 348, MKTG 221; Senior standing.

Economics

ECON 100 - Topics in Economics 1-4 hours. Topics not covered in other economics courses are presented.

ECON 201 - Principles of Microeconomics 4 hours. Introduction to the principles of microeconomics and a survey of contemporary economic issues. Includes study of market systems and structures, government regulation of business, labor markets and income distribution, strategic behavior, and market failure. Prerequisite: sophomore standing.
Course Attribute(s): CLAS: (E2) Soc Sci-Pols/Econ, CoB: Social Science

ECON 202 - Principles of Macroeconomics 3 hours. Study of the factors involved in the problems of unemployment, inflation, economic growth, and the role of fiscal and monetary policies. Includes coverage of the money and banking system and international trade.
Course Attribute(s): CoB: Social Science

ECON 300 - Topics in Economics 1-4 hours. Topics not covered in other Economics courses are presented.

ECON 320 - Sports Economics 4 hours. This course covers the economics of sports and sports leagues. We examine sports market outcomes, the economics of team sports and broadcasting labor issues including determination of player pay, and public financing aspects of sports teams including stadium financing, taxes, and competition policy. We also cover topics relevant to college sports. Prerequisite: ECON 201 or permission of instructor.

ECON 331 - Money and Banking 3 hours. The principles and organization of the monetary and banking system and importance of the money supply. The structure of the banking system and the techniques used by the Federal Reserve are covered, along with monetary theory, other factors affecting income, employment and inflation, the controversies surrounding the use of monetary and fiscal policies and the international dimensions of the issues. Prerequisites: ECON 201/202, junior standing.
Course Attribute(s): CoB: Social Science

ECON 412 - International Economics 3 hours. An introduction to the workings of the world economic system and the interactions among different countries. It consists of three parts: Trade, which asks how and why different countries engage in the process of exchanging goods and services and the consequences of such interactions; International financial and monetary system, which looks at a country's balance of payments account, exchange rate determination, and open macroeconomic analysis and policy; International development, which surveys experiences of developing countries, including their relationship with developed countries. Students analyze developments in the world economy, and judge the soundness and/or appropriateness of government actions. Prerequisites: ECON 201/202, junior standing.
Course Attribute(s): AU: Global Perspective, CoB: Social Science

ECON 420 - Healthcare Economics 3 hours. This course provides an overview of health economics. It largely focuses on empirical research on determinants of health but also provides a basic theoretical framework of health economics.
Course Attribute(s): CoB: Social Science

ECON 425 - Wealth and Inequality 4 hours. This course explores the distribution of wealth and inequality from the economic and policy perspectives. We seek to understand how wealth and income are measured and ask what ae their distributed concerns, and what conclusions can we draw concerning inequality? Prerequisite: Junior/Senior standing or permission of instructor. (Cross-listed as SJST 425)
Course Attribute(s): CoB: Social Science

ECON 445 - Managerial Economics 3 hours. Emphasizes the application of fundamental theoretical and analytical tools of economics useful in managerial decision making. Empirical studies and cases involving actual managerial situations at the levels of industry and firms are examined. Prerequisite: FIN 348 or permission of instructor. (Cross-listed as FIN 445)
Course Attribute(s): CoB: Social Science

ECON 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

ECON 460 - Seminar in Economics 3 hours. The seminar in economics examines major contemporary issues in the field. Students are responsible for presenting, discussing, and writing about ideas, theories, frameworks, and applications within the field expressed in the professional literature. Prerequisite: One course in Economics numbered 300 or above.

ECON 462 - Industrial Organization 3 hours. In this course, the theory of the firm is extended using the structure-conduct-performance paradigm and more recent theories of industrial organization. An important portion of the course is allocated to presentation of factual and institutional material on market structure, firm conduct, industry performance, and antitrust policy. Prerequisites: ECON 201/202 and junior standing.
Course Attribute(s): CoB: Social Science

Finance

FIN 205 - Student Managed Investment Fund 1 hour. A lecture course designed to introduce topics that facilitate the student's ability to participate in the management of the Student Managed Investment Fund. Topics covered include but are not limited to the following: History of Equity Ownership; Debt and Equity Securities; Ratio Analysis; Risk and Return (beta and portfolio analysis), Financial Publications, Research Tools and Databases, Analysis of Financial Statements, Stock and Bond Valuation Techniques; Financial Markets and Stock Screening. Corequisite: FIN 206.
Course Attribute(s): CoB: Field Experience

FIN 206 - Student Managed Investment Fund Laboratory 1 hour. 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.
Course Attribute(s): CoB: Field Experience

FIN 300 - Topics in Finance 1-3 hours. Topics not covered in other finance courses are presented.

FIN 306 - Student Managed Investment Fund Advanced Laboratory 2 hours. Students build on their experience in managing a stock portfolio by engaging in the trading of stocks under supervision of faculty. Students manage an individual portfolio using advanced trading strategies and present a special topic on investing. This course may be repeated one time for

credit. Prerequisites: FIN 205, FIN 206, junior standing and permission of instructor.

FIN 310 - Introduction to Financial Planning 3 hours. In this course students are introduced to the concepts of estate and financial planning. The goal is to provide the student with a firm grounding in the basic lifetime financial planning process along with an overview of the tax advantages of proper estate planning.

FIN 348 - Managerial Finance 3 hours. An introductory course explaining the tools and the new responsibilities modern financial managers deal with in a rapidly changing world environment characterized by uncertainty. The course identifies and examines the financing needs of the firm, its cost of capital, and assets and liabilities management using modern decision support systems for the application of new financial innovations, such as contingent claims and securitization of assets. Prerequisites: ACCT 211/212, ECON 201/202.

FIN 445 - Managerial Economics 3 hours. Emphasizes the application of fundamental theoretical and analytical tools of economics useful in managerial decision making, through an examination of empirical studies and cases involving actual managerial situations at the levels of industry and firms. Prerequisite: FIN 348 or permission of instructor. (Cross-listed as ECON 445)

FIN 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

FIN 454 - Security Analysis 3 hours. Provides a comprehensive introduction to the application of the techniques of security analysis and portfolio management. Relates economic-industry-company analysis to evaluate individual securities: bonds, preferred stocks, common stocks, and options. Considers the procedures involved in the selection of securities portfolio along the concept of risk-return tradeoffs. Prerequisite: FIN 348.

FIN 455 - Business Financial Decisions 3 hours. Examines the question of how financial resources available to the firm should be allocated to many possible investment projects. Emphasizes developing analytical techniques which make it possible to answer questions such as: Should a new plant be built? Equipment replaced? Bonds refunded? A new product introduced? Should a merger or divestment take place? Prerequisite: FIN 348.

FIN 458 - International Financial Management 3 hours. Emphasizes the practical relevance of the microelements of international finance which influence the profit and loss accounts and balance sheets of corporations with overseas operations. Factors such as the impact of exchange rate fluctuations, major alternative non-traditional sources of financing and regional investment decisions, imperfections in world product, factor and financial markets along with country risk-return profiles are examined. Prerequisite: FIN 348 or permission of instructor.
Course Attribute(s): AU: Global Perspective

FIN 460 - Seminar in Finance 3 hours. This seminar course examines major contemporary issues in the field of finance. The topics covered vary from semester to semester. Students are responsible for presenting, discussing, and writing about theories, frameworks, and application expressed in the professional literature. Prerequisite: One course in Finance numbered 300 or above.

Health Planning and Management

HLPM 201 - The Health Care Delivery System 3 hours. This course is an overview of the components and operations of the US Healthcare System. The development of the Healthcare System including major factors that have driven its evolution over time are reviewed. We study the healthcare system by reviewing the foundations, resources and process of the system and their impact on outcomes.Students learn about public policy, governmental regulations and economic drivers of the healthcare system.(Offered Fall, even years)

HLPM 205 - Public Health 3 hours. In this course we explore public health concepts and Issues in community health.Areas covered include individual, social and environmental determinants of health and disease, including epidemiological concepts and methods for gathering information in the public health area, as well as a description of risks. (Offered Fall, even years)

HLPM 301 - Health Care Policy 3 hours. This course introduces the student to the relationship between power and political behavior and how this intersection affects public policy and ultimately healthcare outcomes. Students learn effective methods to anticipate and respond to political situations, as well as develop strategies for building collaborative relationships with the multiple stakeholders that participate in healthcare. The concepts of power will be examined in the context of politics and policy setting. (Offered Fall, odd years)

HLPM 304 - Power and Politics in Health Care 3 hours. Student apply concepts related to the relationships between power and political behavior and how this intersection affects outcomes. Students learn effective methods to anticipate and respond to political situations, as well as develop strategies for building collaborative relationships with multiple constituencies in healthcare. The concept of power is examined in the context of politics and policy setting. (Offered Allen Term, Summer)

HLPM 308 - Health Care Finance for Non-Financial Managers 3 hours. This course introduces financial management concepts to the non-financial manager. Healthcare organizations are the focus but concepts apply to all nonprofit organizations. Topics include financial and managerial accounting as they apply specifically to health care services and the theory and practice of how financial information is gathered and used to provide meaningful conclusions about the financial position and performance of health care organizations.(Offered Allen Term, Summer)

HLPM 310 - Legal and Ethical Issues in Healthcare 3 hours. In this survey course of the law and ethics students study legal and ethical issues of importance to health care managers. Ethical issues are an important aspect of the discussion of the legal principles involved in health care administration and are interwoven in the framework of the overall course. Students gain knowledge of special issues in health care including the principles of liability, social responsibility, patient rights and responsibilities, acquired immune deficiency syndrome, access to health care and payment issues. (Offered Spring, even years)

HLPM 485 - Internship 3 hours. The internship is a faculty-supervised experience in which the student applies theoretical knowledge of healthcare issues in practical situations. Each student submits a paper outlining the experience and is responsible for procuring an on-site supervisor's evaluation of his/her work. A minimum of 180 hours of practical experience is required for the major in Health Planning and Management. Prerequisite: Permission of instructor. (Offered Allen Term, Spring, Summer alternate years)
Course Attribute(s): CoB: Field Experience

HLPM 495 - Seminar: Health Planning and Management 3 hours. This course is a faculty-supervised field experience which gives the student an opportunity to apply classroom knowledge to actual health care delivery situations. The seminar following this experience provides discussion of the key factors contributing to the most critical issues in health care today. The class benefits from students sharing their internship experiences in health-related organizations. Topics include risk management, corporatization of health care, the continuum of long term care, multi-institutional systems, access to health care, and allocation of health care resources. Case studies are used. Prerequisite: Permission of instructor. (Offered Fall, even years)

Law

LAW 241 - The Legal Environment of Business 3 hours. An introduction to the body of law associated with the business environment. Topics include the judicial system and court procedure, business torts and crimes, contracts, bailments, forms of business structure, bankruptcy, an overview of securities regulations and the antitrust laws and consumer protection statutes.

LAW 300 - Special Topics 1-3 hours. Topics not covered in other Law courses are presented.

LAW 442 - Commercial Law 3 hours. An overview of the common law principles and statutory law affecting commercial transactions. Topics include agency, partnerships, corporations, commercial paper and sales. Prerequisites: LAW 241, junior standing.

Leadership

LEAD 201 - Equality and Leadership 2 hours. The course explores leadership theory and issues of equality and leadership. We examine questions such as: what qualities make an effective leader, why are so few women and minorities in leadership roles in certain professions. We approach these questions from both a personal and academic perspective. Participants assess their own leadership style and develop a personal philosophy of leadership.

LEAD 300 - Special Topics in Leadership 1-4 hours. In this course we explore areas not covered by other leadership courses. Topics vary from term to term.

LEAD 475 - Leadership Practicum 2 hours. The course explores leadership theory and issues of equality and leadership. We examine questions such as: what qualities make an effective leader, and approach questions from both a personal and academic perspective. Participants assess their own leadership style and develop a personal philosophy of leadership. Prerequisite: LEAD 201.

LEAD 476 - Service Leadership Experience 2 hours. The course is designed for students interested in a hands-on experience with social leadership ventures. Students research social, cultural and economic issues related to the community of their chosen project -- either an instructor-designated organization or a community improvement project in their own region. Pre- or Co-requisite: LEAD 475.
Course Attribute(s): AU: Service Learning Courses

Management

MGMT 300 - Topics in Management 1-4 hours. Topics not covered in other Management courses are presented.

MGMT 305 - Gender and Organizations 3 hours. This course builds an understanding of gender issues within organizations as well as policies that organizations can implement to create a more equitable work environment. Topics of discussion encompass the impact of gender on communication, influence, and perceptions of competence, what progress has been made regarding gender equality and what still remains to be resolved. (Cross-listed as WGST 305)

MGMT 318 - Gender Equity in Business 3 hours. In this course we explore gender equality issues in leadership. Students examine the challenges/opportunities for women at various phases of careers/levels. This includes the socio-cultural, psychological, organizational, political, and economical issues facing women in business today with reflection on students' experiences. (Cross-listed as WGST 318)

MGMT 328 - Management and Organizational Behavior 3 hours. This course builds an understanding of individual and group behavior within organizations, the means of assessing such organizational behavior and specific techniques for managing behavior toward improved performance. The goal for the course is for students to develop skills grounded in behavioral science that are essential for assuming a leadership position in organizational environments. Prerequisite: Junior standing.

MGMT 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

MGMT 460 - Seminar in Management 3 hours. The seminar in management examines major contemporary issues in the field. Examples of topics include corporate culture, creativity, computer based simulations, total quality management, managing strategic change, and human capital development. Students are responsible for presenting, discussing, and writing about ideas, theories, frameworks, and applications within the field of management. Prerequisite: MGMT 328.

MGMT 472 - Human Resource Management 3 hours. Examines the contribution that a properly functioning personnel department makes to the effectiveness of a business. Covers internal organization and workings of the personnel department, its relationship to the rest of the enterprise, major problem areas, and the legal environment defining the employer-employee relationship. Prerequisite: MGMT 328.

MGMT 484 - Operations Management 3 hours. Introduces students to functions, problems, and techniques associated with management of production operations in manufacturing firms

and service organizations. The problem oriented approach focuses on analytical techniques so students learn to recognize problems arising in operations management areas and to apply analytic techniques meaningfully. Topics include plant location, plant layout and design, inventory control, quality control, production planning and control (including PERT), production scheduling, queuing, mathematical programming, simulation, and forecasting. Prerequisites: ACCT 212, (BUSI 113 or ENGR 305), and junior standing.

Management Information Systems

MIS 101 - Computers and Society 3 hours. Examining the impact of computers on problem-solving in society, students comprehend the general algorithmic approach to organizing, synthesizing and analyzing information and how computers assist in the reasoning process. Students present problem solutions through oral and written communications.
Course Attribute(s): CoB: Quant Reasoning

MIS 390 - Introduction to Management Information Systems 3 hours. This course in information theory covers the subjects of computer hardware and software, the system development process, principles of data management and modern computer-based information systems. Emphasis is placed on business problem analysis and development of computer-based business applications. Prerequisite: junior standing.

MIS 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/ classroom setting. Approved Plan of Study required.

Marketing

MKTG 221 - Marketing Principles and Management 3 hours. A survey of marketing concepts, principles, techniques and theories. Emphasizes the development and implementation of an effective marketing strategy, and control of the marketing function within the firm. The role of marketing in society and the efficient distribution of goods and services are addressed. Prerequisite: Sophomore standing.

MKTG 300 - Topics in Marketing 1-3 hours. Topics not covered in other Marketing courses are presented.

MKTG 310 - Graphic Design in Marketing 3 hours. 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.
MKTG 450 - Independent Study 1-4 hours. Academic inquiry into an area not covered in any established course, and carried on outside the usual instructor/classroom setting. Approved Plan of Study required.

MKTG 452 - Market Research 3 hours. Emphasizes planning, organization and application of marketing research in making marketing decisions. Topics include: marketing information systems, research design, data collection and analysis, and evaluating research results. Emphasis given to sampling methods, hypothesis testing, market measurement and forecasting, use of models in marketing, decision making techniques, and behavioral research methodologies. Cases are used as part of the course. Prerequisite: MKTG 221.
Course Attribute(s): CoB: Field Experience

MKTG 453 - Marketing Practicum 3 hours. Marketing Practicum is a course that puts theory into practice. Students interact with clients to determine what marketing technique would best facilitate their business. Once determined, students execute and develop a marketing plan. Prerequisite: MKTG 221.
Course Attribute(s): CoB: Field Experience

MKTG 460 - Seminar in Marketing 3 hours. The seminar in marketing examines major contemporary issues in the field. Students are responsible for presenting, discussing, and writing about ideas, theories, frameworks, and techniques of marketing. Prerequisite: MKTG 221.

MKTG 479 - Consumer Behavior 3 hours. Deals with changing markets and the influence of environmental and interpersonal factors on consumer behavior. Integrates concepts, theories and tools from social science and quantitative disciplines to provide a framework of understanding consumers and forecasting market demand. Different strategies and techniques of consumer research are presented and evaluated. Prerequisite: MKTG 221.

MKTG 482 - Sales Management 3 hours. Concerned with the management of the personal selling function, this course uses theories and tools of behavioral sciences for developing an effective sales force through recruiting, selection, training, compensating and evaluation of sales performance. Emphasizes sales forecasting, establishment of sales quotas, and sales analysis. Prerequisite: MKTG 221.

MKTG 486 - Integrated Marketing Communications 3 hours. Investigates current theory and methods of promotion. The major elements of the promotional mix are analyzed in detail with emphasis on using pertinent decision theory models when allocating scarce resources to the defined elements of the total promotional mix. Prerequisite: MKTG 221.

MKTG 489 - International Marketing 3 hours. Emphasizes marketing management problems, techniques and strategies in the global marketing environment and the culture dynamics involved in international marketing. Strategies are developed for product, price, promotion and distribution functions given the complex international legal environment and consumer customs in foreign business. Prerequisite: MKTG 221.
Course Attribute(s): AU: Global Perspective

MKTG 499 - Strategic Marketing Management 3 hours. This capstone course offers students the opportunity to focus their experience and knowledge of marketing on an aggressively competitive environment. The course will explore ways in which corporate strategy can be executed by marshalling marketing-oriented resources, and directing them to the achievement of marketing goals. Prerequisites: MKTG 221 and one additional MKTG course.

Registered Academic Programs

The following programs of study are offered by Alfred University. Their Higher Education General Information System (HEGIS) codes are listed to allow cross-reference between Alfred University and other New York institutions. These codes may be requested by state and federal offices when filing for loans and awards.

Note: Enrollment in other than registered or otherwise approved programs may jeopardize a student's eligibility for certain student aid awards.

Major	HEGIS Code	Degree Awarded
Accounting	0502	BS
Art and Design	1001.10	BFA
Art History and Theory	1003	BS
Athletic Training	1299.30	BS
Biology	0401	BA
Biomaterials Engineering	0905	BS
Business Administration	0506	BS
Business and Marketing	0501	BS
Ceramic Engineering	0916	BS
Chemistry	1905	BA
Communication Studies	0601	BA
Criminal Justice Studies	2105	BA
Early Childhood/Childhood Education	0802	BS
English	1501	BA
Environmental Studies	0420	BA
Finance	0504	BS
Foreign Language and Culture Studies	1199	BA
General Science	4902	BA
Geology	1914	BA
Gerontology	2299.10	BA
Global Studies	2210	BA
Glass Engineering Science	0916	BS
Health Fitness Management	0599	BS
Health Planning and Management	1202	BS
History	2205	BA
Individually Structured Major	4901	BA
Interdepartmental Major	4901	BA
Marketing	0509	BS
Materials Science and Engineering	0915	BS
Mathematics	1701	BA or BS
Mathematics with Actuarial Science	1701	BS
Mechanical Engineering	0910	BS
Middle Childhood/Adolescence Educ-Earth Science	1917.01	BA
Middle Childhood/Adolescence Educ-Social Studies	2201.01	BA
Middle Childhood/Adolescence Educ-Biology	0401.01	BA
Middle Childhood/Adolescence Educ-Chemistry	1905.01	BA
Middle Childhood/Adolescence Educ-English	1501.01	BA
Middle Childhood/Adolescence Educ-French	1102.01	BA
Middle Childhood/Adolescence Educ-Math	1701.01	BA
Middle Childhood/Adolescence Educ-Physics	1902.01	BA
Middle Childhood/Adolescence Educ-Spanish	1105.01	BA
Music	1005.00	BA
Philosophy	1509	BA
Physics	1902	BA
Political Science	2207	BA
Psychology	2001	BA
Renewable Energy Engineering	0999	BS
Sociology	2208	BA
Spanish	1105	BA
Special Subjects: Visual Arts	1002	BFA
Theatre	1007	BA